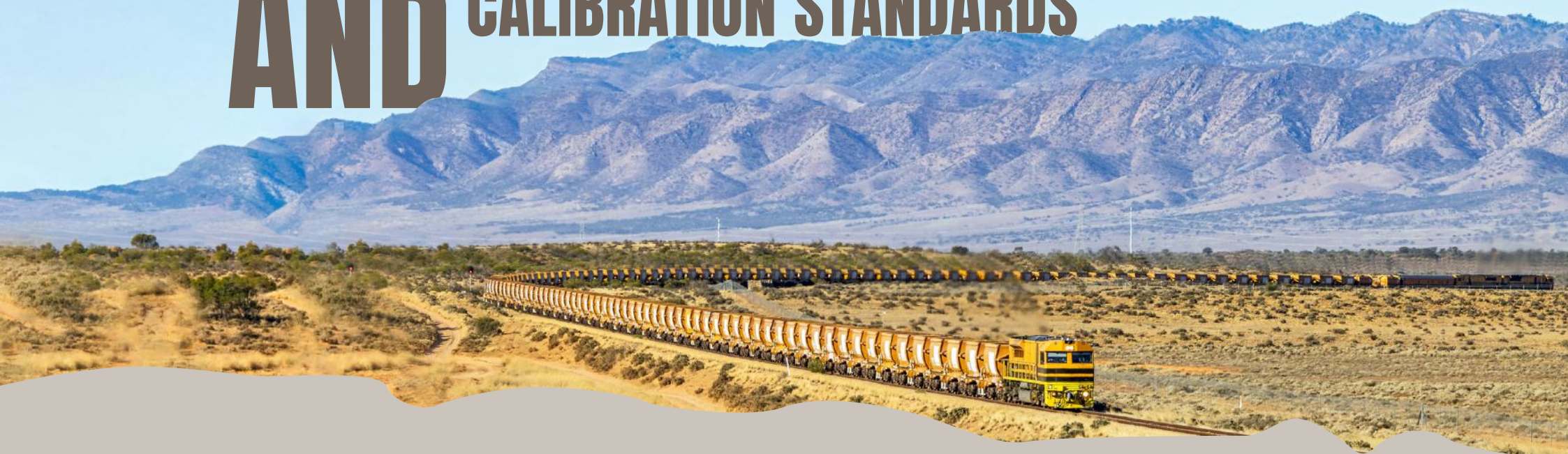




METALS CERTIFIED REFERENCE MATERIALS AND CALIBRATION STANDARDS

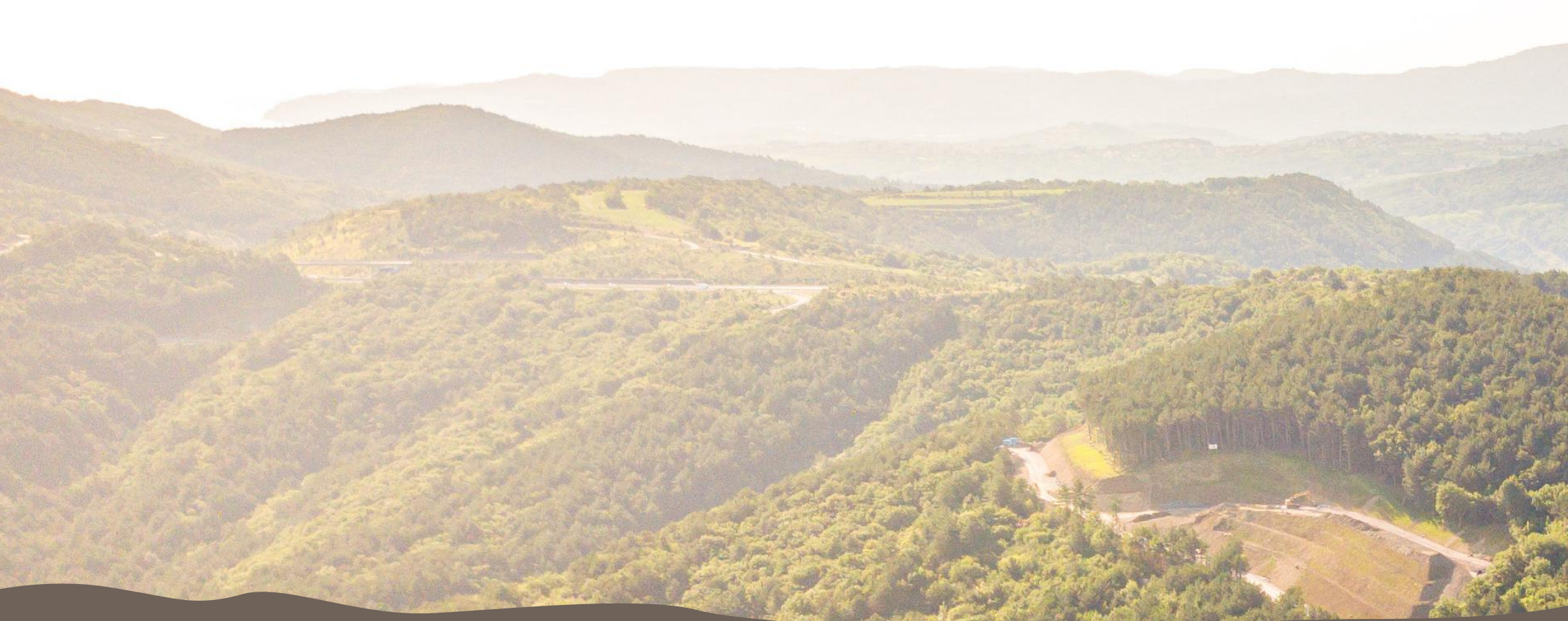


Industrial
VHG | ARMI | MBH
Paragon Scientific

The Material Difference

lgcstandards.com

LGC Quality | ISO 17043 | ISO 17034 | ISO/IEC 17025 | ISO 9001



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**Over 1,400
reference materials
in multiple alloy
groups.**

LGC Industrial offers materials for many stages throughout metal production, including ferro-alloys, high purity material, highly alloyed material and even metal powders for 3D printing.

Our certification process is accredited to ISO 17034 for reference material producers and includes both homogeneity testing of candidate material, and chemical analysis of major, minor and trace elements using a wide range of analytical methods including XRF, ICP-OES, ICP-MS, Arc-Spark Optical Emission, GD, AES and GD, MS.

Chemical analyses are performed in our state-of-the-art laboratory, accredited to ISO/IEC 17025, using XRF, ICP-OES and ICP-MS, as well as through a network of external laboratories utilizing multiple analytical techniques.

This approach ensures that we produce high-quality reference materials with the largest number of certified elements while limiting inter-technique biases.





Key for all tables

For all tables, default unit is %

* Values are listed in PPM

↓ Last of stock

◆ New 2021

Section 1

Powders

Name IARM-Fe316LP-18
Type Additive Manufacturing Powder
Description Austenitic Stainless Steel
Grade AISI 316L

UNS

Ag		Na	
Al	0.006	Nb	(0.001)
As	(0.001)	Nd	
Au		Ni	13.9
B	(<0.005)	O	0.043
Be		P	0.011
Bi	(<0.001)	Pb	0.011
C	0.006	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce	(<0.002)	Re	
Co	0.006	Rh	
Cr	17.9	Ru	
Cu	0.0031	S	0.0041
Fe		Sb	(<0.005)
Ga		Se	(<0.005)
Gd		Si	0.29
Ge		Sn	(<0.005)
H	(<0.001)	Sr	
Hf	(<0.001)	Ta	(<0.005)
Hg		Te	
In		Ti	(<0.008)
Ir		Tl	
La		V	0.006
Li		W	(<0.012)
Mg	(<0.005)	Y	(<0.001)
Mn	1.56	Zn	(<0.01)
Mo	2.81	Zr	(<0.005)
N	0.081		

Name IARM-Ni718P-18
Type Additive Manufacturing Powder
Description Nickel-Chromium-Molybdenum Alloy
Grade AISI 316L

UNS

Ag	(<0.0005)	Na	
Al	0.49	Nb	4.95
As	(<0.01)	Nd	
Au		Ni	53.6
B	(0.0007)	O	0.014
Be		P	0.006
Bi		Pb	(<0.02)
C	0.036	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.008)	Pt	
Ce		Re	
Co	0.097	Rh	
Cr	19.6	Ru	
Cu	0.018	S	0.0013
Fe	17	Sb	(<0.01)
Ga		Se	(<0.005)
Gd		Si	0.036
Ge		Sn	(<0.005)
H	(<0.001)	Sr	
Hf	(<0.002)	Ta	0.006
Hg		Te	
In		Ti	1.01
Ir		Tl	
La	(<0.0005)	V	0.017
Li		W	0.01
Mg	(<0.005)	Y	(<0.001)
Mn	0.026	Zn	(<0.01)
Mo	3.13	Zr	(<0.003)
N	0.01		

Name IARM-Ti64P-18
Type Additive Manufacturing Powder
Description Titanium Alpha-Beta Alloy
Grade Grade 5 (6-4)

UNS

Ag		Na	
Al	6.44	Nb	(0.0004)
As	(<0.005)	Nd	
Au		Ni	(0.003)
B	(<0.005)	O	0.14
Be		P	(0.001)
Bi	(<0.005)	Pb	(0.0003)
C	0.051	Pd	(<0.002)
Ca	(<0.005)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	(<0.011)	Rh	
Cr	(0.004)	Ru	
Cu	(<0.005)	S	0.0012
Fe	0.215	Sb	(0.0003)
Ga		Se	(<0.005)
Gd		Si	(0.021)
Ge		Sn	0.008
H	0.0019	Sr	
Hf	(<0.002)	Ta	(<0.005)
Hg		Te	
In		Ti	
Ir		Tl	
La		V	4.22
Li		W	(0.0004)
Mg	(<0.01)	Y	(<0.002)
Mn	0.01	Zn	(<0.01)
Mo	(<0.005)	Zr	(<0.004)
N	0.05		

Powders

Name IARM-FBP-20
Type Ferro Alloys
Description Ferroboron Alloy
Grade
UNS

Ag		Na	(<0.03)
Al	0.049	Nb	(0.0072)
As	(0.002)	Nd	
Au		Ni	0.04
B	18.4	O	(1.1)
Be		P	(0.02)
Bi	(<0.001)	Pb	(<0.0002)
C	0.39	Pd	
Ca	0.04	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	(0.0019)	Rh	
Cr	0.13	Ru	
Cu	0.01	S	0.004
Fe	77	Sb	(0.0003)
Ga	(<0.0005)	Se	(<0.0002)
Gd		Si	0.66
Ge		Sn	0.0027
H	(0.0176)	Sr	
Hf	(<0.0005)	Ta	(<0.0001)
Hg		Te	
In		Ti	0.28
Ir		Tl	
La		V	0.005
Li	(<0.034)	W	0.0022
Mg	(0.004)	Y	(<0.0001)
Mn	0.25	Zn	(<0.001)
Mo	0.008	Zr	0.037
N	0.004		

Name IARM-FCrP-20
Type Ferro Alloys
Description Ferrochromium Alloy
Grade
UNS

Ag		Na	
Al	(0.04)	Nb	(0.0004)
As	(0.003)	Nd	
Au		Ni	(0.03)
B	(0.0024)	O	0.43
Be		P	0.019
Bi	(<0.001)	Pb	(<0.001)
C	8.6	Pd	
Ca	(0.03)	Pr	
Cd		Pt	
Ce		Re	
Co	0.036	Rh	
Cr	68.8	Ru	
Cu	0.004	S	0.027
Fe	20.6	Sb	<0.001
Ga	(<0.002)	Se	(<0.02)
Gd		Si	0.33
Ge		Sn	(<0.0001)
H	(0.0027)	Sr	
Hf	(<0.0006)	Ta	(<0.0002)
Hg		Te	
In		Ti	(0.02)
Ir		Tl	
La		V	(0.09)
Li		W	(0.006)
Mg	0.12	Y	
Mn	0.12	Zn	(<0.001)
Mo	(0.002)	Zr	(<0.0013)
N	0.013		

Name IARM-FMnP-20
Type Ferro Alloys
Description Ferromanganese Alloy
Grade
UNS

Ag		Na	(<0.01)
Al	(0.04)	Nb	(0.0004)
As	(0.004)	Nd	
Au		Ni	(0.18)
B	0.0019	O	(1.1)
Be		P	0.08
Bi	(0.002)	Pb	(0.002)
C	1.13	Pd	
Ca	(0.18)	Pr	
Cd		Pt	
Ce		Re	
Co	0.019	Rh	
Cr	0.036	Ru	
Cu	0.01	S	0.008
Fe	16.6	Sb	(0.001)
Ga	(<0.003)	Se	
Gd		Si	0.42
Ge		Sn	(0.0003)
H	(0.014)	Sr	
Hf	(<0.001)	Ta	
Hg		Te	
In		Ti	(0.006)
Ir		Tl	
La	(<0.0003)	V	(0.0054)
Li		W	(0.0008)
Mg	(0.03)	Y	
Mn	79.7	Zn	(0.003)
Mo	(0.0011)	Zr	(0.0002)
N	0.083		

Name IARM-FSiP-20
Type Ferro Alloys
Description Ferrosilicon Alloy
Grade
UNS

Ag		Na	
Al	0.31	Nb	0.0018
As	(<0.005)	Nd	
Au		Ni	0.17
B	(0.004)	O	(0.26)
Be		P	0.015
Bi		Pb	(<0.001)
C	0.026	Pd	
Ca	0.17	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.0019	Rh	
Cr	0.068	Ru	
Cu	0.052	S	(0.002)
Fe	21.8	Sb	(0.002)
Ga		Se	
Gd		Si	77
Ge		Sn	(0.0002)
H	(0.0023)	Sr	(0.0039)
Hf	(<0.001)	Ta	(0.0009)
Hg		Te	
In		Ti	0.057
Ir		Tl	
La	(0.0018)	V	(0.005)
Li	(0.0002)	W	0.0019
Mg	0.008	Y	(0.0003)
Mn	0.186	Zn	0.0022
Mo	0.0082	Zr	0.0043
N	(0.005)		

Section 2

Aluminum

Name MBH-RA10-20
Description High Purity Aluminum SUS
Grade
UNS

Name MBH-RA18-20
Description Aluminum SUS, RA18
Grade
UNS

Name IARM-220G
Description QA 10 - SUS
Grade
UNS

Name IARM-221B
Description QA 11 - SUS
Grade
UNS

Name IARM-221C
Description QA 11 - SUS
Grade
UNS

Ag	(<0.5)*	Na	(0.043)*
Al		Nb	(<0.05)*
As	(0.13)*	Nd	(0.38)*
Au	(<0.5)*	Ni	(1.3)*
B	(8.1)*	O	
Be	(<0.05)*	P	(11.5)*
Bi	(<0.01)*	Pb	(0.19)*
C		Pd	(<0.5)*
Ca	(0.08)*	Pr	(0.08)*
Cd	(<0.5)*	Pt	(<0.05)*
Ce	(2)*	Re	(<0.05)*
Co	(0.08)*	Rh	(<0.2)*
Cr	(0.28)*	Ru	(<0.05)*
Cu	(28)*	S	
Fe	(38)*	Sb	(0.1)*
Ga	(3.7)*	Se	(<0.5)*
Gd	(0.08)*	Si	(27)*
Ge	(<0.2)*	Sn	(<0.5)*
H		Sr	(<0.005)*
Hf	(<0.05)*	Ta	(<5)*
Hg	(<0.1)*	Te	(<0.05)*
In	(<0.1)*	Ti	(2.4)*
Ir	(<0.01)*	Tl	(0.06)*
La	(1.3)*	V	(6)*
Li	(<0.05)*	W	(0.058)*
Mg	(8.1)*	Y	(0.05)*
Mn	(2.8)*	Zn	(3.8)*
Mo	(<0.1)*	Zr	(1)*
N			

Ag	(0.055)	Na	
Al	(73.7)	Nb	
As		Nd	
Au		Ni	(2.60)
B	(0.005)	O	
Be	(0.0004)	P	
Bi		Pb	(0.33)
C		Pd	
Ca	(0.010)	Pr	
Cd	(0.002)	Pt	
Ce		Re	
Co	(0.022)	Rh	
Cr	(0.017)	Ru	
Cu	(6.7)	S	
Fe	(0.30)	Sb	(0.41)
Ga	(0.004)	Se	
Gd		Si	(14.0)
Ge		Sn	(0.38)
H		Sr	(0.043)
Hf		Ta	
Hg		Te	
In		Ti	(0.018)
Ir		Tl	
La		V	(0.015)
Li	(0.0003)	W	
Mg	(0.41)	Y	
Mn	(0.33)	Zn	(0.65)
Mo		Zr	(0.015)
N			

Ag	(<0.00001)	Na	(0.00003)
Al		Nb	
As	(0.000012)	Nd	
Au		Ni	
B	(0.00057)	O	
Be	(<0.00001)	P	(0.0006)
Bi	(<0.00001)	Pb	(0.000015)
C		Pd	
Ca	(0.00001)	Pr	
Cd	(<0.00001)	Pt	
Ce		Re	
Co	(<0.00001)	Rh	
Cr		Ru	
Cu		S	
Fe		Sb	(0.00001)
Ga	(0.00014)	Se	
Gd		Si	
Ge		Sn	(<0.00001)
H		Sr	
Hf		Ta	
Hg		Te	
In	(<0.00001)	Ti	
Ir		Tl	
La	(0.00026)	V	(0.00052)
Li		W	
Mg	(0.00087)	Y	
Mn		Zn	
Mo	(0.000015)	Zr	(0.000088)
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be	(0.005)	P	
Bi		Pb	
C		Pd	
Ca	(0.03)	Pr	
Cd		Pt	
Ce		Re	
Co	(0.2)	Rh	
Cr	(0.2)	Ru	
Cu	(0.6)	S	
Fe	(0.2)	Sb	(0.01)
Ga	(0.03)	Se	
Gd		Si	(0.2)
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.1)
Ir		Tl	
La		V	
Li		W	
Mg	(4.8)	Y	
Mn	(0.4)	Zn	(6.8)
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be	(0.005)	P	
Bi		Pb	
C		Pd	
Ca	(0.03)	Pr	
Cd		Pt	
Ce		Re	
Co	(0.2)	Rh	
Cr	(0.2)	Ru	
Cu	(0.6)	S	
Fe	(0.2)	Sb	(0.01)
Ga	(0.03)	Se	
Gd		Si	(0.2)
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.1)
Ir		Tl	
La		V	
Li		W	
Mg	(4.8)	Y	
Mn	(0.4)	Zn	(6.8)
Mo		Zr	
N			

Aluminum

Name IARM-221D
Description QA 11 - SUS
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be	(0.005)	P	
Bi		Pb	
C		Pd	
Ca	(0.03)	Pr	
Cd		Pt	
Ce		Re	
Co	(0.2)	Rh	
Cr	(0.2)	Ru	
Cu	(0.6)	S	
Fe	(0.2)	Sb	
Ga	(0.03)	Se	
Gd		Si	(0.2)
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.1)
Ir		Tl	
La		V	
Li		W	
Mg	(4.8)	Y	
Mn	(0.4)	Zn	(6.8)
Mo		Zr	
N			

Name MBH-164X ALSU57
Description Setting Up Sample
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.1
B		O	
Be	0.1	P	
Bi		Pb	0.11
C		Pd	
Ca	<0.001	Pr	
Cd		Pt	
Ce		Re	
Co	0.2	Rh	
Cr	0.01	Ru	
Cu	4	S	
Fe	0.55	Sb	0.12
Ga		Se	
Gd		Si	0.9
Ge		Sn	0.01
H		Sr	0.003
Hf		Ta	
Hg		Te	
In		Ti	0.3
Ir		Tl	
La		V	
Li		W	
Mg	0.15	Y	
Mn	0.06	Zn	0.12
Mo		Zr	0.18
N			

Name MBH-164X ALSU58
Description Setting Up Sample
Grade
UNS

Ag	0.09	Na	
Al		Nb	
As		Nd	
Au		Ni	0.12
B		O	
Be	0.015	P	
Bi		Pb	0.001
C		Pd	
Ca	<0.001	Pr	
Cd		Pt	
Ce		Re	
Co	0.025	Rh	
Cr	0.06	Ru	
Cu	0.75	S	
Fe	0.25	Sb	0.03
Ga		Se	
Gd		Si	9.5
Ge		Sn	0.13
H		Sr	0.07
Hf		Ta	
Hg		Te	
In		Ti	0.02
Ir		Tl	
La		V	
Li		W	
Mg	0.9	Y	
Mn	0.45	Zn	0.25
Mo		Zr	0.025
N			

Name MBH-51X G00H1 D ↓
Description Residuals in Aluminum
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.231
B		O	
Be		P	
Bi	0.023	Pb	0.0021
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0061	Ru	
Cu	0.0131	S	
Fe	0.831	Sb	(0.003)
Ga		Se	
Gd		Si	0.142
Ge		Sn	0.096
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0135
Ir		Tl	
La		V	0.0081
Li		W	
Mg	0.054	Y	
Mn	0.0074	Zn	0.243
Mo		Zr	(0.001)
N			

Name MBH-51X G00H2 E ↓
Description Residuals in Aluminum
Grade
UNS

Ag		Na	
Al		Nb	
As	(0.005)	Nd	
Au		Ni	0.119
B		O	
Be		P	
Bi	0.011	Pb	0.114
C		Pd	
Ca		Pr	
Cd	0.0031	Pt	
Ce		Re	
Co		Rh	
Cr	0.0174	Ru	
Cu	0.111	S	
Fe	0.356	Sb	0.0265
Ga	0.011	Se	
Gd		Si	0.35
Ge		Sn	0.0065
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.128
Ir		Tl	
La		V	0.0148
Li		W	
Mg	0.093	Y	
Mn	0.154	Zn	0.113
Mo		Zr	0.015
N			

Aluminum

Name MBH-51X G00H3 D
Description Residuals in Aluminum
Grade
UNS

Name MBH-51X G00H4 C
Description Residuals in Aluminum
Grade
UNS

Name IARM-101A ↓
Description Residuals in Aluminum
Grade AA 1100
UNS A91100

Name IARM-102A ↓
Description Aluminum-Copper Alloy
Grade AA 2014
UNS A92014

Name IARM-103A ↓
Description Aluminum-Copper Alloy
Grade AA 2018
UNS A92018

Ag	0.0079	Na	
Al		Nb	
As	(0.0003)	Nd	
Au		Ni	0.0115
B		O	
Be		P	
Bi	0.076	Pb	0.055
C		Pd	
Ca		Pr	
Cd	0.0186	Pt	
Ce		Re	
Co	0.0042	Rh	
Cr	0.095	Ru	
Cu	0.399	S	
Fe	0.313	Sb	0.0025
Ga	0.01	Se	
Gd		Si	0.895
Ge		Sn	0.083
H		Sr	
Hf		Ta	
Hg	(<0.001)	Te	
In		Ti	0.0043
Ir		Tl	
La		V	0.0142
Li		W	
Mg	0.0077	Y	
Mn	0.21	Zn	0.097
Mo		Zr	0.0095
N			

Ag	0.0208	Na	
Al		Nb	
As	(0.0026)	Nd	
Au		Ni	0.0323
B		O	
Be		P	
Bi	0.0246	Pb	0.0204
C		Pd	
Ca		Pr	
Cd	0.0267	Pt	
Ce		Re	
Co	0.0109	Rh	
Cr	0.0602	Ru	
Cu	0.0465	S	
Fe	0.082	Sb	0.0077
Ga	0.0315	Se	
Gd		Si	(0.04)
Ge		Sn	0.0285
H		Sr	
Hf		Ta	
Hg	0.0011	Te	
In		Ti	0.0292
Ir		Tl	
La		V	0.022
Li		W	
Mg	0.054	Y	
Mn	0.0792	Zn	0.197
Mo		Zr	0.0278
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.036
B	(0.002)	O	
Be	0.003	P	0.005
Bi	0.014	Pb	0.018
C		Pd	
Ca	0.002	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.017	Ru	
Cu	0.092	S	
Fe	0.6	Sb	
Ga	0.03	Se	
Gd		Si	0.16
Ge		Sn	0.017
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.032
Ir		Tl	
La		V	0.012
Li		W	
Mg	0.012	Y	
Mn	0.029	Zn	0.03
Mo		Zr	0.011
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.04
B	(0.001)	O	
Be	0.003	P	0.005
Bi	0.027	Pb	0.034
C		Pd	
Ca	0.003	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.043	Ru	
Cu	4.51	S	
Fe	0.48	Sb	
Ga	0.028	Se	
Gd		Si	0.89
Ge		Sn	0.036
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.051
Ir		Tl	
La		V	0.024
Li		W	
Mg	0.45	Y	
Mn	0.77	Zn	0.053
Mo		Zr	0.011
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	2.16
B	(0.001)	O	
Be	0.004	P	0.003
Bi	0.027	Pb	0.026
C		Pd	
Ca	0.005	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.011	Ru	
Cu	4.16	S	
Fe	0.38	Sb	
Ga	0.026	Se	
Gd		Si	0.5
Ge		Sn	0.027
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.036
Ir		Tl	
La		V	0.01
Li		W	
Mg	0.65	Y	
Mn	0.02	Zn	0.033
Mo		Zr	0.011
N			

Aluminum

Name IARM-104A ↓
Description Aluminum-Copper Alloy
Grade AA 2024
UNS A92024

Name IARM-104B
Description Aluminum-Copper Alloy
Grade AA 2024
UNS A92024

Name IARM-343A
Description Aluminum-Copper Alloy
Grade AA 7055
UNS A97055

Name MBH-56X A201.1 A
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-56X G14H4 C
Description Aluminum-Copper Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.03
B	(0.002)	O	
Be	0.004	P	0.002
Bi	0.015	Pb	0.025
C		Pd	
Ca	0.007	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.016	Ru	
Cu	4.66	S	
Fe	0.25	Sb	
Ga	0.026	Se	
Gd		Si	0.31
Ge		Sn	0.02
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.03
Ir		Tl	
La		V	0.01
Li		W	
Mg	1.65	Y	
Mn	0.65	Zn	0.017
Mo		Zr	0.012
N			

Ag	(0.0005)	Na	(0.0005)
Al		Nb	
As		Nd	
Au		Ni	0.0053
B	0.0016	O	
Be	0.00021	P	(<0.005)
Bi	(<0.002)	Pb	0.014
C		Pd	
Ca	(<0.002)	Pr	
Cd	(<0.0002)	Pt	
Ce		Re	
Co	(0.0005)	Rh	
Cr	0.0088	Ru	
Cu	4.63	S	
Fe	0.262	Sb	(<0.02)
Ga	0.011	Se	
Gd		Si	0.15
Ge		Sn	0.003
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.056
Ir		Tl	
La		V	0.006
Li		W	
Mg	1.56	Y	
Mn	0.645	Zn	0.065
Mo		Zr	0.001
N			

Ag	(<0.003)	Na	(0.0005)
Al		Nb	
As		Nd	
Au		Ni	0.005
B	0.0007	O	
Be	(<0.004)	P	0.001
Bi	(<0.009)	Pb	0.0012
C		Pd	
Ca	0.0024	Pr	
Cd	(0.0002)	Pt	
Ce		Re	
Co	(0.0008)	Rh	
Cr	0.0009	Ru	
Cu	2.29	S	
Fe	0.084	Sb	(<0.004)
Ga	0.012	Se	
Gd		Si	0.05
Ge		Sn	(<0.005)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0175
Ir		Tl	
La		V	0.0058
Li		W	
Mg	2.04	Y	
Mn	0.002	Zn	8.15
Mo		Zr	0.152
N			

Ag	0.494	Na	
Al		Nb	
As		Nd	
Au		Ni	0.0066
B		O	
Be		P	
Bi		Pb	0.002
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0029	Ru	
Cu	4.49	S	
Fe	0.089	Sb	
Ga		Se	
Gd		Si	0.193
Ge		Sn	(0.0025)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.132
Ir		Tl	
La		V	
Li		W	
Mg	0.198	Y	
Mn	0.31	Zn	0.0113
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	2.37
B		O	
Be		P	
Bi		Pb	0.05
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0288	Rh	
Cr	0.0309	Ru	
Cu	3.82	S	
Fe	0.251	Sb	
Ga		Se	
Gd		Si	0.504
Ge		Sn	0.037
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.069
Ir		Tl	
La		V	0.0252
Li		W	
Mg	1.72	Y	
Mn	0.122	Zn	0.091
Mo		Zr	
N			

Aluminum

Name MBH-56X G2000J1 C
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-56X G2000J3 C
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-56X G2000J4 C
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-56X G2000J5 C
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-56X G2007 A
Description Aluminum-Copper Alloy
Grade AA 2007
UNS A92007

Ag	0.0048	Na	
Al		Nb	
As		Nd	
Au		Ni	0.0046
B		O	
Be		P	
Bi	0.008	Pb	0.022
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.00044	Rh	
Cr	0.0007	Ru	
Cu	3.29	S	
Fe	0.086	Sb	
Ga		Se	
Gd		Si	0.099
Ge		Sn	0.099
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0053
Ir		Tl	
La		V	0.0097
Li	(0.0001)	W	
Mg	1.7	Y	
Mn	1.27	Zn	0.864
Mo		Zr	0.293
N			

Ag	0.0105	Na	
Al		Nb	
As		Nd	
Au		Ni	0.091
B		O	
Be	0.0039	P	
Bi	0.152	Pb	0.375
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.108	Rh	
Cr	0.0573	Ru	
Cu	4.78	S	
Fe	0.382	Sb	
Ga		Se	
Gd		Si	0.773
Ge		Sn	0.0157
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.196
Ir		Tl	
La		V	0.0099
Li	0.0019	W	
Mg	1.018	Y	
Mn	0.589	Zn	0.114
Mo		Zr	0.0268
N			

Ag	0.0122	Na	
Al		Nb	
As		Nd	
Au		Ni	0.089
B		O	
Be		P	
Bi	0.0049	Pb	0.879
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0247	Rh	
Cr	0.053	Ru	
Cu	5.02	S	
Fe	0.705	Sb	
Ga		Se	
Gd		Si	1.33
Ge		Sn	0.0092
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.135
Ir		Tl	
La		V	0.0132
Li	0.0025	W	
Mg	0.505	Y	
Mn	0.271	Zn	0.0131
Mo		Zr	0.105
N			

Ag	0.234	Na	
Al		Nb	
As		Nd	
Au		Ni	0.204
B		O	
Be	0.005	P	
Bi	0.136	Pb	0.69
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.077	Rh	
Cr	0.0078	Ru	
Cu	5.52	S	
Fe	0.98	Sb	
Ga		Se	
Gd		Si	0.321
Ge		Sn	(<0.005)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.063
Ir		Tl	
La		V	0.027
Li	0.009	W	
Mg	0.39	Y	
Mn	0.007	Zn	0.368
Mo		Zr	0.064
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0087
B		O	
Be		P	
Bi	0.147	Pb	0.889
C		Pd	
Ca	0.0051	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0354	Ru	
Cu	3.699	S	
Fe	0.252	Sb	
Ga		Se	
Gd		Si	0.328
Ge		Sn	0.0676
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0236
Ir		Tl	
La		V	
Li		W	
Mg	0.663	Y	
Mn	0.605	Zn	0.386
Mo		Zr	0.002
N			

Aluminum

Name MBH- 56X G2011 A
Description Aluminum-Copper Alloy
Grade AA 2011
UNS A92011

Name MBH-56X G2014 A
Description Aluminum-Copper Alloy
Grade AA 2014
UNS A92014

Name MBH-56X G2024 A
Description Aluminum-Copper Alloy
Grade AA 2024
UNS A92024

Name MBH-56X G250J2 D
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-56X G250J3 C
Description Aluminum-Copper Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0044
B		O	
Be		P	
Bi	0.527	Pb	0.332
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0031	Ru	
Cu	5.7	S	
Fe	0.632	Sb	
Ga		Se	
Gd		Si	0.089
Ge		Sn	0.0037
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0121
Ir		Tl	
La		V	
Li		W	
Mg	0.0102	Y	
Mn	0.0183	Zn	0.0188
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.007
B		O	
Be		P	
Bi	0.0013	Pb	0.011
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0766	Ru	
Cu	4.41	S	
Fe	0.243	Sb	
Ga		Se	
Gd		Si	0.611
Ge		Sn	(0.0047)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0244
Ir		Tl	
La		V	
Li		W	
Mg	0.453	Y	
Mn	0.572	Zn	0.195
Mo		Zr	0.135
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0055
B		O	
Be		P	
Bi		Pb	0.001
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0389	Ru	
Cu	4.34	S	
Fe	0.178	Sb	
Ga		Se	
Gd		Si	0.122
Ge		Sn	0.001
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0099
Ir		Tl	
La		V	0.007
Li		W	
Mg	1.509	Y	
Mn	0.658	Zn	0.0446
Mo		Zr	0.0053
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.1
B		O	
Be		P	
Bi		Pb	(0.0016)
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.195	Rh	
Cr	0.063	Ru	
Cu	4.81	S	
Fe	0.346	Sb	0.324
Ga		Se	
Gd		Si	0.211
Ge		Sn	(0.004)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.21
Ir		Tl	
La		V	0.018
Li		W	
Mg	0.06	Y	
Mn	0.225	Zn	0.155
Mo		Zr	0.247
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.92
B		O	
Be	0.0014	P	
Bi		Pb	0.024
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.264	Rh	
Cr	0.024	Ru	
Cu	4.9	S	
Fe	0.079	Sb	0.35
Ga		Se	
Gd		Si	0.11
Ge		Sn	0.031
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.162
Ir		Tl	
La		V	0.036
Li		W	
Mg	(0.001)	Y	
Mn	0.278	Zn	0.103
Mo		Zr	0.275
N			

Aluminum

Name MBH-56X G250J5 D
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-57X AlCu25 A
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-57X AlCu28 A
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-57X G12H1 C ↓
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-57X G12H2 C
Description Aluminum-Copper Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.77
B		O	
Be	0.0022	P	
Bi		Pb	0.076
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.34	Rh	
Cr	0.047	Ru	
Cu	4.36	S	
Fe	0.535	Sb	0.076
Ga		Se	
Gd		Si	0.205
Ge		Sn	0.097
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.051
Ir		Tl	
La		V	0.021
Li		W	
Mg	0.022	Y	
Mn	0.15	Zn	0.086
Mo		Zr	0.22
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0017
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	25.08	S	
Fe	0.42	Sb	
Ga		Se	
Gd		Si	5.78
Ge		Sn	0.0024
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0012	Y	
Mn	0.0035	Zn	5.89
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.003
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	27.78	S	
Fe	0.22	Sb	
Ga		Se	
Gd		Si	5.44
Ge		Sn	0.0023
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.002	Y	
Mn	0.0032	Zn	5.42
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.31
B		O	
Be	0.0019	P	
Bi		Pb	0.016
C		Pd	
Ca		Pr	
Cd	0.012	Pt	
Ce		Re	
Co	0.113	Rh	
Cr	0.069	Ru	
Cu	5.54	S	
Fe	0.88	Sb	
Ga		Se	
Gd		Si	2.52
Ge		Sn	0.095
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.114
Ir		Tl	
La		V	0.15
Li	0.008	W	
Mg	0.4	Y	
Mn	0.032	Zn	1.03
Mo		Zr	0.07
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.309
B	(0.003)	O	
Be		P	
Bi		Pb	0.12
C		Pd	
Ca		Pr	
Cd	0.0025	Pt	
Ce		Re	
Co	0.0391	Rh	
Cr	0.0148	Ru	
Cu	7.96	S	
Fe	1.021	Sb	
Ga		Se	
Gd		Si	2.79
Ge		Sn	0.202
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0081
Ir		Tl	
La		V	0.0027
Li		W	
Mg	0.336	Y	
Mn	0.09	Zn	0.999
Mo		Zr	0.0111
N			

Aluminum

Name MBH-57X G12H3 C
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-57X G12H5 G
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-57X G12H6 A
Description Aluminum-Copper Alloy
Grade
UNS

Name MBH-57X G12H7 A
Description Aluminum-Copper Alloy
Grade
UNS

Name IARM-106A
Description Aluminum-Magnesium Alloy
Grade AA 5052
UNS A95052

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.479
B		O	
Be	0.0016	P	
Bi		Pb	0.092
C		Pd	
Ca		Pr	
Cd	0.0055	Pt	
Ce		Re	
Co	0.039	Rh	
Cr	0.086	Ru	
Cu	8.69	S	
Fe	0.35	Sb	
Ga		Se	
Gd		Si	1.48
Ge		Sn	0.132
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.196
Ir		Tl	
La		V	0.0126
Li		W	
Mg	0.296	Y	
Mn	0.117	Zn	0.554
Mo		Zr	(0.001)
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.11
B		O	
Be	0.003	P	
Bi		Pb	0.068
C		Pd	
Ca		Pr	
Cd	0.023	Pt	
Ce		Re	
Co	0.054	Rh	
Cr	0.016	Ru	
Cu	12.2	S	
Fe	0.19	Sb	0.066
Ga	0.017	Se	
Gd		Si	0.55
Ge		Sn	0.067
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.036
Ir		Tl	
La		V	0.033
Li		W	
Mg	0.028	Y	
Mn	0.073	Zn	0.072
Mo		Zr	0.045
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.387
B		O	
Be	(0.0003)	P	
Bi		Pb	0.11
C		Pd	
Ca		Pr	
Cd	0.0028	Pt	
Ce		Re	
Co	0.0247	Rh	
Cr	0.054	Ru	
Cu	8.28	S	
Fe	0.85	Sb	
Ga		Se	
Gd		Si	1.63
Ge		Sn	0.108
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.108
Ir		Tl	
La		V	0.0143
Li		W	
Mg	0.292	Y	
Mn	0.223	Zn	6.74
Mo		Zr	0.0262
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.038
B	0.0093	O	
Be		P	
Bi		Pb	0.03
C		Pd	
Ca		Pr	
Cd	0.0002	Pt	
Ce		Re	
Co	0.0483	Rh	
Cr	0.0221	Ru	
Cu	4.75	S	
Fe	0.369	Sb	
Ga		Se	
Gd		Si	1.21
Ge		Sn	0.0307
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0565
Ir		Tl	
La		V	0.0111
Li		W	
Mg	0.02	Y	
Mn	0.0327	Zn	0.384
Mo		Zr	0.0328
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.03
B	(0.001)	O	
Be	0.004	P	0.003
Bi	0.021	Pb	0.03
C		Pd	
Ca	0.008	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.198	Ru	
Cu	0.05	S	
Fe	0.32	Sb	
Ga	0.029	Se	
Gd		Si	0.1
Ge		Sn	0.024
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.039
Ir		Tl	
La		V	0.01
Li		W	
Mg	2.59	Y	
Mn	0.07	Zn	0.04
Mo		Zr	0.012
N			

Aluminum

Name IARM-107A ↓
Description Aluminum-Magnesium Alloy
Grade AA 5083
UNS A95083

Name MBH-AL5182-20 ◆
Description Aluminum-Magnesium Alloy
Grade AA 5182
UNS A95182

Name IARM-108A ↓
Description Aluminum-Magnesium Alloy
Grade AA 5356
UNS A95356

Name IARM-109C ↓
Description Aluminum-Magnesium Alloy
Grade AA 6061
UNS A96061

Name IARM-AI6061-18 ↓
Description Aluminum-Magnesium Alloy
Grade AA 6061
UNS A96061

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.03
B	(0.001)	O	
Be	0.004	P	0.001
Bi	0.028	Pb	0.025
C		Pd	
Ca	0.005	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.14	Ru	
Cu	0.08	S	
Fe	0.38	Sb	
Ga	0.029	Se	
Gd		Si	0.18
Ge		Sn	0.021
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.034
Ir		Tl	
La		V	0.01
Li		W	
Mg	4.75	Y	
Mn	0.789	Zn	0.041
Mo		Zr	0.016
N			

Ag	(<0.0003)	Na	(<0.003)
Al	(94.6)	Nb	
As	(0.001)	Nd	
Au		Ni	0.024
B	(0.0008)	O	
Be	0.002	P	(<0.003)
Bi	0.0096	Pb	0.019
C		Pd	
Ca	(0.002)	Pr	
Cd	0.0012	Pt	
Ce		Re	
Co	(<0.0002)	Rh	
Cr	0.063	Ru	
Cu	0.105	S	
Fe	0.316	Sb	0.0034
Ga	0.0065	Se	
Gd		Si	0.25
Ge		Sn	0.034
H		Sr	0.025
Hf		Ta	
Hg		Te	
In		Ti	0.042
Ir		Tl	
La		V	0.033
Li		W	
Mg	4.01	Y	
Mn	0.39	Zn	0.096
Mo		Zr	0.0051
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.02
B	(0.001)	O	
Be	0.004	P	0.001
Bi	0.02	Pb	0.025
C		Pd	
Ca	0.006	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.062	Ru	
Cu	0.04	S	
Fe	0.2	Sb	
Ga	0.029	Se	
Gd		Si	0.13
Ge		Sn	0.021
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.09
Ir		Tl	
La		V	0.01
Li		W	
Mg	5.08	Y	
Mn	0.111	Zn	0.02
Mo		Zr	0.011
N			

Ag	(0.0004)	Na	
Al		Nb	
As		Nd	
Au		Ni	0.0123
B	(0.0012)	O	
Be	(0.001)	P	(0.002)
Bi	0.003	Pb	0.0072
C		Pd	
Ca	0.002	Pr	
Cd	(0.0003)	Pt	
Ce		Re	
Co	(0.0006)	Rh	
Cr	0.102	Ru	
Cu	0.302	S	
Fe	0.529	Sb	(<0.005)
Ga	0.013	Se	
Gd		Si	0.616
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0176
Ir		Tl	
La		V	0.009
Li		W	
Mg	0.83	Y	
Mn	0.108	Zn	0.121
Mo		Zr	0.0018
N			

Ag	(<0.002)	Na	(<0.001)
Al		Nb	
As	(<0.005)	Nd	
Au		Ni	0.0081
B	(0.0008)	O	
Be	(<0.0001)	P	(0.003)
Bi	(<0.007)	Pb	0.0023
C		Pd	
Ca	(0.002)	Pr	
Cd	(0.0001)	Pt	
Ce		Re	
Co		Rh	
Cr	0.103	Ru	
Cu	0.271	S	
Fe	0.31	Sb	(<0.01)
Ga	(0.0122)	Se	
Gd		Si	0.67
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In	(<0.003)	Ti	0.016
Ir		Tl	
La		V	0.013
Li		W	
Mg	0.88	Y	
Mn	0.105	Zn	0.023
Mo	(<0.001)	Zr	0.0022
N			

Aluminum

Name MBH-AL6061-19 ♦
Description Aluminum-Magnesium Alloy
Grade AA 6061
UNS A96061

Name MBH-AL6063-20 ♦
Description Aluminum-Magnesium Alloy
Grade AA 6063
UNS A96063

Name IARM-111A ↓
Description Aluminum-Magnesium Alloy
Grade AA 7075
UNS A97075

Name IARM-111B
Description Aluminum-Magnesium Alloy
Grade AA 7075
UNS A97075

Name MBH-511X G05H1 J
Description Aluminum-Magnesium Alloy
Grade
UNS

Ag	(0.001)	Na	(<0.0006)
Al	(97.1)	Nb	
As	(<0.001)	Nd	
Au		Ni	0.058
B	(0.001)	O	
Be	(0.0005)	P	(0.01)
Bi	0.007	Pb	0.09
C		Pd	
Ca	(0.002)	Pr	
Cd	0.0012	Pt	
Ce		Re	
Co	(<0.0002)	Rh	
Cr	0.254	Ru	
Cu	0.247	S	(<0.0005)
Fe	0.4	Sb	0.0023
Ga	0.0064	Se	
Gd		Si	0.71
Ge		Sn	(0.003)
H		Sr	0.0069
Hf		Ta	
Hg		Te	
In		Ti	0.055
Ir		Tl	
La		V	0.028
Li		W	
Mg	0.896	Y	
Mn	0.106	Zn	0.101
Mo		Zr	0.0034
N			

Ag	(0.0001)	Na	
Al	(98.79)	Nb	
As	(<0.001)	Nd	
Au		Ni	0.0043
B	0.0011	O	
Be	(<0.0001)	P	(<0.005)
Bi	(<0.002)	Pb	0.001
C		Pd	
Ca	(0.003)	Pr	
Cd	(<0.0001)	Pt	
Ce		Re	
Co	0.0003	Rh	
Cr	0.0088	Ru	
Cu	0.03	S	
Fe	0.156	Sb	(<0.001)
Ga	0.0109	Se	
Gd		Si	0.46
Ge		Sn	(0.001)
H		Sr	(<0.0001)
Hf		Ta	
Hg		Te	
In		Ti	0.0107
Ir		Tl	
La		V	0.0115
Li	(0.001)	W	
Mg	0.481	Y	
Mn	0.023	Zn	0.0064
Mo		Zr	0.0011
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.03
B	(0.002)	O	
Be	0.004	P	0.001
Bi	0.021	Pb	0.021
C		Pd	
Ca	0.008	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.208	Ru	
Cu	1.73	S	
Fe	0.87	Sb	
Ga	0.029	Se	
Gd		Si	0.17
Ge		Sn	0.018
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.094
Ir		Tl	
La		V	0.02
Li		W	
Mg	2.75	Y	
Mn	0.045	Zn	5.764
Mo		Zr	0.006
N			

Ag	(<0.002)	Na	(0.003)
Al		Nb	
As		Nd	
Au		Ni	0.0098
B	(0.0008)	O	
Be	0.00087	P	(<0.0040)
Bi	(<0.002)	Pb	0.0063
C		Pd	
Ca	(0.001)	Pr	
Cd	(0.0003)	Pt	
Ce		Re	
Co	(0.0005)	Rh	
Cr	0.205	Ru	
Cu	1.38	S	
Fe	0.225	Sb	(<0.015)
Ga	0.008	Se	
Gd		Si	0.192
Ge		Sn	(0.002)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0427
Ir		Tl	
La		V	0.0035
Li		W	
Mg	2.2	Y	
Mn	0.093	Zn	5.7
Mo		Zr	0.0132
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.12
B		O	
Be		P	
Bi		Pb	0.0132
C		Pd	
Ca		Pr	
Cd	0.0071	Pt	
Ce		Re	
Co		Rh	
Cr	0.245	Ru	
Cu	0.319	S	
Fe	0.73	Sb	
Ga	0.0096	Se	
Gd		Si	0.397
Ge		Sn	0.203
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.201
Ir		Tl	
La		V	0.071
Li		W	
Mg	1.99	Y	
Mn	0.0111	Zn	0.23
Mo		Zr	0.0022
N			

Aluminum

Name MBH-511X G05H2 H
Description Aluminum-Magnesium Alloy
Grade
UNS

Name MBH-511X G05H3 H ↓
Description Aluminum-Magnesium Alloy
Grade
UNS

Name MBH-511X G05H5 G
Description Aluminum-Magnesium Alloy
Grade
UNS

Name MBH-511X G10H4 C
Description Aluminum-Magnesium Alloy
Grade
UNS

Name MBH-511X G10H5 B
Description Aluminum-Magnesium Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.157
B	0.0083	O	
Be	0.0018	P	
Bi		Pb	0.049
C		Pd	
Ca		Pr	
Cd	0.0023	Pt	
Ce		Re	
Co		Rh	
Cr	0.172	Ru	
Cu	0.188	S	
Fe	0.641	Sb	
Ga		Se	
Gd		Si	0.299
Ge		Sn	0.0495
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.068
Ir		Tl	
La		V	0.0248
Li		W	
Mg	3.58	Y	
Mn	0.124	Zn	0.372
Mo		Zr	0.0105
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.09
B		O	
Be	0.0074	P	
Bi		Pb	0.107
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.095	Ru	
Cu	0.093	S	
Fe	0.41	Sb	
Ga		Se	
Gd		Si	0.21
Ge		Sn	0.096
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.25
Ir		Tl	
La		V	
Li		W	
Mg	3.97	Y	
Mn	0.4	Zn	0.092
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0124
B	0.0011	O	
Be	0.0004	P	
Bi		Pb	0.247
C		Pd	
Ca		Pr	
Cd	0.0115	Pt	
Ce		Re	
Co		Rh	
Cr	0.0306	Ru	
Cu	0.0365	S	
Fe	0.081	Sb	
Ga		Se	
Gd		Si	0.0626
Ge		Sn	0.0112
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0246
Ir		Tl	
La		V	0.0216
Li		W	
Mg	8.99	Y	
Mn	1.273	Zn	0.131
Mo		Zr	0.1
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.117
B		O	
Be	0.0061	P	
Bi		Pb	0.08
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.083	Ru	
Cu	0.163	S	
Fe	0.193	Sb	
Ga		Se	
Gd		Si	0.244
Ge		Sn	0.075
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.155
Ir		Tl	
La		V	
Li		W	
Mg	10.24	Y	
Mn	0.228	Zn	0.117
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.036
B		O	
Be	0.0274	P	
Bi		Pb	0.165
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0017	Ru	
Cu	0.0227	S	
Fe	0.057	Sb	
Ga		Se	
Gd		Si	0.05
Ge		Sn	0.013
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0052
Ir		Tl	
La		V	
Li	0.0032	W	
Mg	13.97	Y	
Mn	0.098	Zn	0.029
Mo		Zr	
N			

Aluminum

Name MBH-511X G3000B1 C
Description Aluminum-Magnesium Alloy
Grade
UNS

Name MBH-511X G3000B4 C
Description Aluminum-Magnesium Alloy
Grade
UNS

Name MBH-511X G6012
Description Aluminum-Magnesium Alloy
Grade AA 6012 Type
UNS

Name MBH-511X G6012A
Description Aluminum-Magnesium Alloy
Grade AA 6012 Type
UNS

Name MBH-511X G6023 A
Description Aluminum-Magnesium Alloy
Grade AA 6023
UNS A96023

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.142
B		O	
Be		P	
Bi		Pb	0.145
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0972	Ru	
Cu	0.287	S	
Fe	0.669	Sb	
Ga	0.051	Se	
Gd		Si	0.788
Ge		Sn	0.163
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0327
Ir		Tl	
La		V	0.054
Li		W	
Mg	0.253	Y	
Mn	0.752	Zn	0.0347
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0347
B		O	
Be	0.014	P	
Bi		Pb	0.0285
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0121	Ru	
Cu	0.086	S	
Fe	0.44	Sb	
Ga	0.0284	Se	
Gd		Si	0.13
Ge		Sn	0.0456
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.052
Ir		Tl	
La		V	0.0199
Li		W	
Mg	1.267	Y	
Mn	0.916	Zn	0.058
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0154
B		O	
Be	0.0072	P	
Bi	0.552	Pb	1.1
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.269	Ru	
Cu	0.114	S	
Fe	0.285	Sb	
Ga		Se	
Gd		Si	1.35
Ge		Sn	0.04
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.016
Ir		Tl	
La		V	
Li		W	
Mg	1.1	Y	
Mn	0.91	Zn	0.255
Mo		Zr	0.032
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.048
B		O	
Be	0.011	P	
Bi	0.701	Pb	0.211
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0223	Ru	
Cu	0.351	S	
Fe	0.71	Sb	
Ga		Se	
Gd		Si	0.768
Ge		Sn	1.88
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.197
Ir		Tl	
La		V	
Li		W	
Mg	0.712	Y	
Mn	0.424	Zn	0.06
Mo		Zr	0.048
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.036
B		O	
Be	0.002	P	
Bi	0.353	Pb	0.011
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0054	Ru	
Cu	0.451	S	
Fe	0.51	Sb	
Ga		Se	
Gd		Si	1.21
Ge		Sn	1.037
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0117
Ir		Tl	
La		V	
Li		W	
Mg	0.512	Y	
Mn	0.556	Zn	0.026
Mo		Zr	0.011
N			

Aluminum

Name MBH-511X G6026 A
Description Aluminum-Magnesium Alloy
Grade AA 6026
UNS A96026

Name MBH-511X G6063 A ↓
Description Aluminum-Magnesium Alloy
Grade AA 6026
UNS A96026

Name MBH-511X G6065 A
Description Aluminum-Magnesium Alloy
Grade AA 6065
UNS A96065

Name MBH-511X G6082 A
Description Aluminum-Magnesium Alloy
Grade AA 6082
UNS A96082

Name MBH-511X G6082 B
Description Aluminum-Magnesium Alloy
Grade AA 6082
UNS A96082

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0075
B	0.0017	O	
Be		P	
Bi	0.498	Pb	0.277
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0706	Ru	
Cu	0.413	S	
Fe	0.47	Sb	
Ga	0.0092	Se	
Gd		Si	0.898
Ge		Sn	0.0043
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0255
Ir		Tl	
La		V	0.0066
Li		W	
Mg	0.692	Y	
Mn	0.703	Zn	0.0775
Mo		Zr	0.003
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0021
B		O	
Be		P	
Bi		Pb	0.0011
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0021	Ru	
Cu	0.0014	S	
Fe	0.185	Sb	
Ga		Se	
Gd		Si	0.412
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.011
Ir		Tl	
La		V	0.0087
Li		W	
Mg	0.437	Y	
Mn	0.0239	Zn	0.0062
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0144
B		O	
Be	0.0011	P	
Bi	1.27	Pb	0.031
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0759	Ru	
Cu	0.214	S	
Fe	0.74	Sb	
Ga		Se	
Gd		Si	0.495
Ge		Sn	0.0251
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.112
Ir		Tl	
La		V	
Li		W	
Mg	1.18	Y	
Mn	0.131	Zn	0.164
Mo		Zr	0.144
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0035
B		O	
Be		P	
Bi		Pb	0.0012
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0606	Ru	
Cu	0.0184	S	
Fe	0.081	Sb	
Ga		Se	
Gd		Si	0.753
Ge		Sn	0.0011
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0278
Ir		Tl	
La		V	
Li		W	
Mg	0.759	Y	
Mn	0.534	Zn	0.054
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0044
B		O	
Be		P	
Bi	(0.0007)	Pb	(0.001)
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0055	Ru	
Cu	0.0141	S	
Fe	0.18	Sb	
Ga		Se	
Gd		Si	0.91
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0158
Ir		Tl	
La		V	
Li		W	
Mg	0.66	Y	
Mn	0.566	Zn	0.0016
Mo		Zr	
N			

Aluminum

Name MBH-511X G6262 A
Description Aluminum-Magnesium Alloy
Grade AA 6262
UNS A96262

Name MBH-511X G6262 B
Description Aluminum-Magnesium Alloy
Grade AA 6262
UNS A96262

Name IARM-105A ↓
Description Aluminum-Magnesium Alloy
Grade AA 3003
UNS A93003

Name MBH-AL3104-20 ♦
Description Aluminum-Magnesium Alloy
Grade AA 3104
UNS A93104

Name MBH-514X 9091.1 C
Description Aluminum-Magnesium Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.028
B		O	
Be	0.0011	P	
Bi	0.444	Pb	0.0081
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.121	Ru	
Cu	0.267	S	
Fe	0.58	Sb	
Ga		Se	
Gd		Si	0.649
Ge		Sn	0.539
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.045
Ir		Tl	
La		V	
Li		W	
Mg	0.881	Y	
Mn	0.163	Zn	0.198
Mo		Zr	0.0051
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0034
B		O	
Be		P	
Bi	0.424	Pb	0.499
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0666	Ru	
Cu	0.243	S	
Fe	0.329	Sb	
Ga		Se	
Gd		Si	0.557
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0194
Ir		Tl	
La		V	
Li		W	
Mg	0.829	Y	
Mn	0.0737	Zn	0.0209
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.04
B	(0.001)	O	
Be	0.003	P	0.005
Bi	0.017	Pb	0.023
C		Pd	
Ca	0.003	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.019	Ru	
Cu	0.09	S	
Fe	0.66	Sb	
Ga	0.028	Se	
Gd		Si	0.25
Ge		Sn	0.022
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.023
Ir		Tl	
La		V	0.01
Li		W	
Mg	0.01	Y	
Mn	1.08	Zn	0.038
Mo		Zr	0.013
N			

Ag	(<0.0005)	Na	(<0.005)
Al	(96.8)	Nb	
As	(0.004)	Nd	
Au		Ni	0.043
B	(0.0012)	O	
Be	0.0005	P	(<0.005)
Bi	0.009	Pb	0.011
C		Pd	
Ca	(<0.007)	Pr	
Cd	0.0053	Pt	
Ce		Re	
Co	(<0.0003)	Rh	
Cr	0.024	Ru	
Cu	0.197	S	(<0.001)
Fe	0.315	Sb	0.004
Ga	0.0057	Se	
Gd		Si	0.23
Ge		Sn	0.031
H		Sr	0.004
Hf		Ta	
Hg		Te	
In		Ti	0.059
Ir		Tl	
La		V	0.037
Li		W	
Mg	1.1	Y	
Mn	1.07	Zn	0.098
Mo		Zr	0.008
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	(0.0026)
B		O	
Be		P	
Bi		Pb	0.016
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	(<0.005)	Ru	
Cu	0.046	S	
Fe	0.081	Sb	
Ga		Se	
Gd		Si	0.035
Ge		Sn	0.013
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0017
Ir		Tl	
La		V	
Li		W	
Mg	(0.001)	Y	
Mn	6.93	Zn	0.029
Mo		Zr	0.184
N			

Aluminum

Name MBH-AL356.2-19 ♦
Description Aluminum-Silicon Alloy
Grade AA 356.2
UNS A03562

Name IARM-113A ↓
Description Aluminum-Silicon Alloy
Grade AA 4032
UNS A94032

Name IARM-116A ↓
Description Aluminum-Silicon Alloy
Grade AA 4043
UNS A94043

Name IARM-115A ↓
Description Aluminum-Silicon Alloy
Grade AA 4145
UNS A94145

Name IARM-112A ↓
Description Aluminum-Silicon Alloy
Grade AA 4343
UNS A94343

Ag	(<0.001)	Na	
Al	(92)	Nb	
As		Nd	
Au		Ni	0.058
B	(<0.0008)	O	
Be	(0.0002)	P	(<0.005)
Bi	0.0083	Pb	0.105
C		Pd	
Ca	0.0031	Pr	
Cd	0.0023	Pt	
Ce		Re	
Co	0.0008	Rh	
Cr	0.03	Ru	
Cu	0.172	S	(<0.002)
Fe	0.22	Sb	0.0041
Ga	0.015	Se	
Gd		Si	6.9
Ge		Sn	0.0076
H		Sr	0.0168
Hf		Ta	
Hg		Te	
In		Ti	0.185
Ir		Tl	
La		V	0.029
Li	(<0.001)	W	
Mg	0.39	Y	
Mn	0.052	Zn	0.088
Mo		Zr	0.0057
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.97
B	(0.001)	O	
Be	0.004	P	0.002
Bi	0.022	Pb	0.03
C		Pd	
Ca	0.004	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.031	Ru	
Cu	0.94	S	
Fe	0.47	Sb	
Ga	0.031	Se	
Gd		Si	11.38
Ge		Sn	0.027
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.057
Ir		Tl	
La		V	0.02
Li		W	
Mg	1.18	Y	
Mn	0.033	Zn	0.033
Mo		Zr	0.008
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.06
B	(0.002)	O	
Be	0.004	P	0.004
Bi	0.023	Pb	0.029
C		Pd	
Ca	0.006	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.027	Ru	
Cu	0.05	S	
Fe	0.34	Sb	
Ga	0.03	Se	
Gd		Si	5.21
Ge		Sn	0.029
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.046
Ir		Tl	
La		V	0.02
Li		W	
Mg	0.05	Y	
Mn	0.05	Zn	0.05
Mo		Zr	0.007
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.03
B	(0.002)	O	
Be	0.004	P	0.003
Bi	0.028	Pb	0.028
C		Pd	
Ca	0.004	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.05	Ru	
Cu	4.24	S	
Fe	0.55	Sb	
Ga	0.028	Se	
Gd		Si	10.13
Ge		Sn	0.024
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.061
Ir		Tl	
La		V	0.03
Li		W	
Mg	0.04	Y	
Mn	0.052	Zn	0.051
Mo		Zr	0.007
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.04
B	(0.003)	O	
Be	0.004	P	0.003
Bi	0.015	Pb	0.02
C		Pd	
Ca	0.004	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.021	Ru	
Cu	0.06	S	
Fe	0.5	Sb	
Ga	0.029	Se	
Gd		Si	7.49
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.05
Ir		Tl	
La		V	0.01
Li		W	
Mg	0.03	Y	
Mn	0.048	Zn	0.049
Mo		Zr	0.015
N			

Aluminum

Name IARM-114A
Description Aluminum-Silicon Alloy
Grade AA 4643
UNS A94643

Name IARM-110A ↓
Description Aluminum-Silicon Alloy
Grade AA 6253
UNS A96253

Name MBH-55X G04H8 K
Description Aluminum-Silicon Alloy
Grade AA A319.0
UNS A13190 Type

Name MBH-54X G06H1 R
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X G06H3 P
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.04
B	(0.001)	O	
Be	0.004	P	0.005
Bi	0.019	Pb	0.02
C		Pd	
Ca	0.005	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.028	Ru	
Cu	0.04	S	
Fe	0.16	Sb	
Ga	0.028	Se	
Gd		Si	3.82
Ge		Sn	0.017
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.052
Ir		Tl	
La		V	0.01
Li		W	
Mg	0.1	Y	
Mn	0.041	Zn	0.031
Mo		Zr	0.008
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.03
B	(0.001)	O	
Be	0.005	P	0.003
Bi	0.03	Pb	0.03
C		Pd	
Ca	0.007	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.259	Ru	
Cu	0.04	S	
Fe	0.29	Sb	
Ga	0.028	Se	
Gd		Si	0.65
Ge		Sn	0.026
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.046
Ir		Tl	
La		V	0.01
Li		W	
Mg	1.36	Y	
Mn	0.025	Zn	2.104
Mo		Zr	0.016
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.26
B		O	
Be		P	
Bi	0.011	Pb	0.154
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0208	Rh	
Cr	0.05	Ru	
Cu	3.56	S	
Fe	0.58	Sb	
Ga		Se	
Gd		Si	5.48
Ge		Sn	0.102
H		Sr	0.0032
Hf		Ta	
Hg		Te	
In		Ti	0.211
Ir		Tl	
La		V	0.03
Li	0.001	W	
Mg	0.174	Y	
Mn	0.358	Zn	1.07
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.611
B		O	
Be		P	
Bi	0.006	Pb	0.082
C		Pd	
Ca		Pr	
Cd	0.0074	Pt	
Ce		Re	
Co	0.015	Rh	
Cr	0.084	Ru	
Cu	0.63	S	
Fe	1.08	Sb	
Ga		Se	
Gd		Si	8.43
Ge		Sn	0.133
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.248
Ir		Tl	
La		V	0.01
Li	(<0.001)	W	
Mg	0.489	Y	
Mn	0.022	Zn	0.6
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.214
B		O	
Be		P	
Bi	0.0067	Pb	0.0203
C		Pd	
Ca		Pr	
Cd	0.0048	Pt	
Ce		Re	
Co	0.0208	Rh	
Cr	0.053	Ru	
Cu	0.322	S	
Fe	0.51	Sb	
Ga		Se	
Gd		Si	9.94
Ge		Sn	0.0488
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.079
Ir		Tl	
La		V	0.0278
Li		W	
Mg	0.202	Y	
Mn	0.345	Zn	0.027
Mo		Zr	
N			

Aluminum

Name MBH-54X G06H4 R
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X G13H1 N ↓
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X G13H3 M
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X G13H4 Q
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X G13H4 R
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.124
B		O	
Be		P	
Bi		Pb	0.04
C		Pd	
Ca	0.0024	Pr	
Cd	0.0028	Pt	
Ce		Re	
Co	0.117	Rh	
Cr	0.0132	Ru	
Cu	0.128	S	
Fe	0.262	Sb	
Ga	0.0057	Se	
Gd		Si	11.96
Ge		Sn	0.0057
H		Sr	0.0024
Hf		Ta	
Hg		Te	
In		Ti	0.121
Ir		Tl	
La		V	0.0604
Li	0.0018	W	
Mg	0.123	Y	
Mn	0.502	Zn	0.124
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.83
B		O	
Be	0.0078	P	
Bi	(<0.001)	Pb	0.24
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0051	Rh	
Cr	0.062	Ru	
Cu	1.87	S	
Fe	0.801	Sb	
Ga		Se	
Gd		Si	8.91
Ge		Sn	0.26
H		Sr	(<0.001)
Hf		Ta	
Hg		Te	
In		Ti	0.112
Ir		Tl	
La		V	
Li		W	
Mg	2.89	Y	
Mn	0.0137	Zn	0.37
Mo		Zr	(<0.005)
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.95
B		O	
Be	0.0075	P	
Bi		Pb	0.05
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.009	Rh	
Cr	0.06	Ru	
Cu	0.82	S	
Fe	0.79	Sb	
Ga		Se	
Gd		Si	10.2
Ge		Sn	0.092
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.152
Ir		Tl	
La		V	
Li		W	
Mg	0.89	Y	
Mn	0.43	Zn	0.42
Mo		Zr	(0.004)
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.789
B		O	
Be	0.0018	P	
Bi		Pb	0.062
C		Pd	
Ca	(0.0015)	Pr	
Cd		Pt	
Ce		Re	
Co	0.0048	Rh	
Cr	0.283	Ru	
Cu	0.688	S	
Fe	0.534	Sb	
Ga		Se	
Gd		Si	12.41
Ge		Sn	0.06
H		Sr	(0.037)
Hf		Ta	
Hg		Te	
In		Ti	0.109
Ir		Tl	
La		V	
Li		W	
Mg	0.644	Y	
Mn	0.227	Zn	0.443
Mo		Zr	0.0165
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.75
B		O	
Be	0.0022	P	
Bi		Pb	0.047
C		Pd	
Ca	0.0035	Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.032	Ru	
Cu	0.68	S	
Fe	0.39	Sb	
Ga	0.01	Se	
Gd		Si	12.2
Ge		Sn	0.047
H		Sr	0.043
Hf		Ta	
Hg		Te	
In		Ti	0.091
Ir		Tl	
La		V	0.003
Li		W	
Mg	0.64	Y	
Mn	0.59	Zn	0.195
Mo		Zr	0.019
N			

Aluminum

Name MBH-54X G13H5 L
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.115
B		O	
Be	0.0049	P	
Bi		Pb	0.013
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0016	Rh	
Cr	0.044	Ru	
Cu	0.216	S	
Fe	0.715	Sb	
Ga		Se	
Gd		Si	13.26
Ge		Sn	0.009
H		Sr	(0.033)
Hf		Ta	
Hg		Te	
In		Ti	0.032
Ir		Tl	
La		V	
Li		W	
Mg	0.092	Y	
Mn	0.119	Zn	0.07
Mo		Zr	
N			

Name MBH-54X G231H1 F
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.295
B		O	
Be	(0.0001)	P	
Bi		Pb	0.147
C		Pd	
Ca	0.0075	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.116	Ru	
Cu	1.063	S	
Fe	0.892	Sb	
Ga		Se	
Gd		Si	9.5
Ge		Sn	0.169
H		Sr	0.0041
Hf		Ta	
Hg		Te	
In		Ti	0.029
Ir		Tl	
La		V	
Li		W	
Mg	0.339	Y	
Mn	0.0111	Zn	0.624
Mo		Zr	
N			

Name MBH-54X G231H2 C
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.171
B		O	
Be	0.0146	P	
Bi		Pb	0.082
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0469	Ru	
Cu	0.868	S	
Fe	0.131	Sb	
Ga		Se	
Gd		Si	11.6
Ge		Sn	0.127
H		Sr	(0.0006)
Hf		Ta	
Hg		Te	
In		Ti	0.085
Ir		Tl	
La		V	
Li		W	
Mg	0.159	Y	
Mn	0.191	Zn	0.397
Mo		Zr	
N			

Name MBH-54X G231H3 C
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0932
B		O	
Be	0.0003	P	
Bi		Pb	0.008
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.063	Ru	
Cu	0.42	S	
Fe	0.393	Sb	
Ga		Se	
Gd		Si	13.17
Ge		Sn	0.0139
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.128
Ir		Tl	
La		V	
Li		W	
Mg	0.039	Y	
Mn	0.477	Zn	0.13
Mo		Zr	
N			

Name MBH-54X G25D4 P
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0665
B		O	
Be	0.0067	P	
Bi	0.0705	Pb	0.142
C		Pd	
Ca		Pr	
Cd	0.007	Pt	
Ce		Re	
Co	0.0204	Rh	
Cr	0.043	Ru	
Cu	0.148	S	
Fe	0.14	Sb	
Ga		Se	
Gd		Si	7.22
Ge		Sn	0.076
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0978
Ir		Tl	
La		V	0.0542
Li		W	
Mg	0.151	Y	
Mn	0.195	Zn	0.207
Mo		Zr	
N			

Aluminum

Name MBH-54X G25D6 A
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X G25DX A ↓
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X GS20J1 E
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X GS20J2 E
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-54X GS20J3 D
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0044
B		O	
Be	0.022	P	
Bi		Pb	(0.003)
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0009	Ru	
Cu	0.0021	S	
Fe	0.08	Sb	
Ga	0.0027	Se	
Gd		Si	5.97
Ge		Sn	(0.002)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0071
Ir		Tl	
La		V	0.0133
Li		W	
Mg	0.715	Y	
Mn	0.0096	Zn	0.005
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0084
B		O	
Be		P	
Bi		Pb	0.0018
C		Pd	
Ca	0.0048	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0053	Ru	
Cu	0.02	S	
Fe	0.0792	Sb	
Ga	0.0209	Se	
Gd		Si	7.2
Ge		Sn	0.0011
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.1519
Ir		Tl	
La		V	0.008
Li		W	
Mg	0.402	Y	
Mn	0.0302	Zn	0.0354
Mo		Zr	0.0065
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.159
B		O	
Be	(0.0001)	P	
Bi		Pb	0.12
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.115	Ru	
Cu	0.308	S	
Fe	0.79	Sb	
Ga		Se	
Gd		Si	18.8
Ge		Sn	0.13
H		Sr	(<0.0001)
Hf		Ta	
Hg		Te	
In		Ti	0.129
Ir		Tl	
La		V	
Li		W	
Mg	0.186	Y	
Mn	0.097	Zn	0.43
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.091
B		O	
Be	(<0.0001)	P	
Bi		Pb	0.066
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.066	Ru	
Cu	0.168	S	
Fe	0.56	Sb	
Ga		Se	
Gd		Si	18.7
Ge		Sn	0.075
H		Sr	(<0.0001)
Hf		Ta	
Hg		Te	
In		Ti	0.082
Ir		Tl	
La		V	
Li		W	
Mg	0.178	Y	
Mn	0.059	Zn	0.305
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Aluminum

Name MBH-54X GS20J4 D
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.265
B		O	
Be	0.0017	P	
Bi		Pb	0.0014
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.194	Ru	
Cu	(0.0037)	S	
Fe	0.227	Sb	
Ga		Se	
Gd		Si	25.5
Ge		Sn	(0.0021)
H		Sr	(0.002)
Hf		Ta	
Hg		Te	
In		Ti	0.107
Ir		Tl	
La		V	
Li		W	
Mg	0.005	Y	
Mn	0.146	Zn	0.224
Mo		Zr	
N			

Name MBH-55X A30J4 G
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.164
B		O	
Be		P	(0.003)
Bi		Pb	0.0257
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0752	Ru	
Cu	3.21	S	
Fe	0.511	Sb	
Ga		Se	
Gd		Si	16.4
Ge		Sn	0.019
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0231
Ir		Tl	
La		V	0.02
Li		W	
Mg	0.508	Y	
Mn	0.35	Zn	0.067
Mo		Zr	
N			

Name MBH-55X G02D10 L
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.645
B		O	
Be	0.0389	P	
Bi		Pb	0.022
C		Pd	
Ca		Pr	
Cd	0.0012	Pt	
Ce		Re	
Co	0.0544	Rh	
Cr	0.128	Ru	
Cu	4.59	S	
Fe	0.975	Sb	0.0086
Ga		Se	
Gd		Si	7.33
Ge		Sn	0.138
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0302
Ir		Tl	
La		V	0.0341
Li		W	
Mg	0.0206	Y	
Mn	0.0524	Zn	2.77
Mo		Zr	
N			

Name MBH-55X G02D5 A
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0652
B		O	
Be	0.0037	P	
Bi		Pb	0.067
C		Pd	
Ca		Pr	
Cd	0.0182	Pt	
Ce		Re	
Co	0.0752	Rh	
Cr	0.76	Ru	
Cu	0.406	S	
Fe	0.557	Sb	0.031
Ga		Se	
Gd		Si	10.03
Ge		Sn	0.051
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.018
Ir		Tl	
La		V	0.0129
Li		W	
Mg	0.331	Y	
Mn	0.391	Zn	0.131
Mo		Zr	
N			

Name MBH-55X G02D6 K
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0511
B		O	
Be	0.0026	P	
Bi		Pb	0.058
C		Pd	
Ca		Pr	
Cd	0.0115	Pt	
Ce		Re	
Co	0.0195	Rh	
Cr	0.366	Ru	
Cu	0.51	S	
Fe	0.528	Sb	0.015
Ga		Se	
Gd		Si	11.55
Ge		Sn	0.0355
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.055
Ir		Tl	
La		V	0.0182
Li		W	
Mg	0.376	Y	
Mn	0.3	Zn	0.577
Mo		Zr	
N			

Aluminum

Name MBH-55X G02D7 P
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G02D8 M
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G02D9 K
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G02DX B
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G02DY A
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.209
B		O	
Be	0.0001	P	
Bi		Pb	0.352
C		Pd	
Ca	0.007	Pr	
Cd	0.0008	Pt	
Ce		Re	
Co	0.0378	Rh	
Cr	0.0558	Ru	
Cu	1.489	S	
Fe	1.02	Sb	0.0021
Ga		Se	
Gd		Si	10.24
Ge		Sn	0.171
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.214
Ir		Tl	
La		V	0.0242
Li		W	
Mg	0.343	Y	
Mn	0.493	Zn	0.908
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.406
B		O	
Be	0.0008	P	
Bi		Pb	0.201
C		Pd	
Ca		Pr	
Cd	0.0029	Pt	
Ce		Re	
Co	0.0107	Rh	
Cr	0.0756	Ru	
Cu	2.481	S	
Fe	0.776	Sb	0.0112
Ga		Se	
Gd		Si	9.24
Ge		Sn	0.201
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.1535
Ir		Tl	
La		V	0.0536
Li		W	
Mg	0.1517	Y	
Mn	0.256	Zn	1.415
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.494
B		O	
Be	0.0035	P	
Bi	0.033	Pb	0.1
C		Pd	
Ca		Pr	
Cd	0.0012	Pt	
Ce		Re	
Co	0.0074	Rh	
Cr	0.185	Ru	
Cu	3.51	S	
Fe	0.423	Sb	0.049
Ga		Se	
Gd		Si	8.49
Ge		Sn	0.187
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.096
Ir		Tl	
La		V	0.0223
Li		W	
Mg	0.093	Y	
Mn	0.269	Zn	2.48
Mo		Zr	
N			

Ag	0.0046	Na	
Al		Nb	
As		Nd	
Au		Ni	0.207
B		O	
Be		P	0.0019
Bi	0.0168	Pb	0.0319
C		Pd	
Ca	0.0021	Pr	
Cd	0.0007	Pt	
Ce		Re	
Co	0.0096	Rh	
Cr	0.0308	Ru	
Cu	2.198	S	
Fe	0.762	Sb	
Ga		Se	
Gd		Si	9.45
Ge		Sn	0.0285
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0553
Ir		Tl	
La		V	0.0119
Li		W	
Mg	0.115	Y	
Mn	0.244	Zn	0.989
Mo		Zr	0.0109
N			

Ag	0.0102	Na	
Al		Nb	
As		Nd	
Au		Ni	0.109
B		O	
Be	0.0012	P	(0.01)
Bi	0.01	Pb	0.062
C		Pd	
Ca	(0.001)	Pr	
Cd	0.0032	Pt	
Ce		Re	
Co	0.0195	Rh	
Cr	0.063	Ru	
Cu	3.67	S	
Fe	0.591	Sb	
Ga		Se	
Gd		Si	11.31
Ge		Sn	0.0747
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0687
Ir		Tl	
La		V	0.025
Li		W	
Mg	0.309	Y	
Mn	0.107	Zn	0.153
Mo		Zr	0.0218
N			

Aluminum

Name MBH-55X G04H10 D
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0232
B		O	
Be		P	
Bi	0.029	Pb	(0.0074)
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.043	Rh	
Cr	0.09	Ru	
Cu	1.36	S	
Fe	0.512	Sb	
Ga	0.011	Se	
Gd		Si	7.21
Ge		Sn	(<0.01)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0097
Ir		Tl	
La		V	0.008
Li	(0.001)	W	
Mg	0.004	Y	
Mn	0.532	Zn	2.26
Mo		Zr	
N			

Name MBH-55X G04H7 E
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.5
B		O	
Be		P	
Bi	0.022	Pb	0.227
C		Pd	
Ca		Pr	
Cd	0.0073	Pt	
Ce		Re	
Co	0.03	Rh	
Cr	0.035	Ru	
Cu	4.65	S	
Fe	0.633	Sb	
Ga		Se	
Gd		Si	4.43
Ge		Sn	0.174
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0476
Ir		Tl	
La		V	0.0057
Li	0.0066	W	
Mg	0.263	Y	
Mn	0.212	Zn	0.537
Mo		Zr	
N			

Name MBH-55X G04H8 J
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.197
B		O	
Be		P	
Bi	0.007	Pb	0.128
C		Pd	
Ca		Pr	
Cd	0.0055	Pt	
Ce		Re	
Co	0.016	Rh	
Cr	0.0301	Ru	
Cu	2.86	S	
Fe	0.529	Sb	
Ga		Se	
Gd		Si	4.96
Ge		Sn	0.0809
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.179
Ir		Tl	
La		V	0.0214
Li	0.0033	W	
Mg	0.126	Y	
Mn	0.255	Zn	0.998
Mo		Zr	
N			

Name MBH-55X G04H9 E
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.16
B		O	
Be		P	
Bi	(0.0037)	Pb	0.101
C		Pd	
Ca		Pr	
Cd	0.0018	Pt	
Ce		Re	
Co	0.0114	Rh	
Cr	0.0172	Ru	
Cu	2.7	S	
Fe	0.393	Sb	
Ga		Se	
Gd		Si	6.6
Ge		Sn	0.0563
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.117
Ir		Tl	
La		V	0.0188
Li	(0.0028)	W	
Mg	0.043	Y	
Mn	0.436	Zn	1.7
Mo		Zr	
N			

Name MBH-55X G04HX A
Description Aluminum-Silicon Alloy
Grade
UNS

Ag	0.003	Na	
Al		Nb	
As		Nd	
Au		Ni	0.302
B		O	
Be	0.0006	P	(0.002)
Bi	0.0058	Pb	0.0125
C		Pd	
Ca	0.0011	Pr	
Cd	0.0048	Pt	
Ce		Re	
Co	0.006	Rh	
Cr	0.0165	Ru	
Cu	3.4	S	
Fe	0.28	Sb	0.0053
Ga		Se	
Gd		Si	5.78
Ge		Sn	0.0112
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.176
Ir		Tl	
La		V	0.0183
Li		W	
Mg	0.063	Y	
Mn	0.193	Zn	0.492
Mo		Zr	0.0278
N			

Aluminum

Name MBH-55X G26H1 F
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G26H2 F
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G26H3 F
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G26H4 D
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G26H5 E
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.012
B		O	
Be		P	
Bi	0.07	Pb	0.24
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.022	Rh	
Cr	0.2	Ru	
Cu	4.34	S	
Fe	1.78	Sb	
Ga		Se	
Gd		Si	7.69
Ge		Sn	(0.008)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.21
Ir		Tl	
La		V	0.012
Li		W	
Mg	0.29	Y	
Mn	0.015	Zn	1.14
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.41
B		O	
Be		P	
Bi	0.035	Pb	0.111
C		Pd	
Ca		Pr	
Cd	(0.0024)	Pt	
Ce		Re	
Co	0.052	Rh	
Cr	0.083	Ru	
Cu	4.14	S	
Fe	0.71	Sb	
Ga		Se	
Gd		Si	9.36
Ge		Sn	0.11
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.12
Ir		Tl	
La		V	0.011
Li		W	
Mg	1.49	Y	
Mn	0.52	Zn	0.64
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.51
B		O	
Be		P	
Bi		Pb	0.23
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.076	Rh	
Cr	0.13	Ru	
Cu	2.19	S	
Fe	1.07	Sb	
Ga		Se	
Gd		Si	9.6
Ge		Sn	0.16
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.147
Ir		Tl	
La		V	0.02
Li		W	
Mg	1.01	Y	
Mn	0.45	Zn	0.79
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.909
B		O	
Be		P	
Bi	(0.025)	Pb	0.12
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0623	Ru	
Cu	3.72	S	
Fe	0.511	Sb	
Ga		Se	
Gd		Si	10.37
Ge		Sn	0.234
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.304
Ir		Tl	
La		V	0.0189
Li		W	
Mg	1.64	Y	
Mn	0.165	Zn	0.286
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.13
B		O	
Be		P	
Bi	0.0201	Pb	0.0108
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.015	Rh	
Cr	0.0394	Ru	
Cu	1.4	S	
Fe	0.199	Sb	
Ga		Se	
Gd		Si	11.38
Ge		Sn	0.035
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.018
Ir		Tl	
La		V	0.0169
Li		W	
Mg	1.41	Y	
Mn	0.495	Zn	0.008
Mo		Zr	
N			

Aluminum

Name MBH-55X G28J1 Z ↓
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	2.47
B		O	
Be		P	(0.0048)
Bi		Pb	0.0036
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.119	Rh	
Cr	0.319	Ru	
Cu	1.82	S	
Fe	0.678	Sb	
Ga		Se	
Gd		Si	14.33
Ge		Sn	0.182
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.104
Ir		Tl	
La		V	0.0095
Li		W	
Mg	1.26	Y	
Mn	0.024	Zn	0.258
Mo		Zr	
N			

Name MBH-55X G28J5 Y
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.43
B		O	
Be		P	(<0.005)
Bi		Pb	0.18
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.009	Ru	
Cu	0.69	S	
Fe	0.26	Sb	
Ga		Se	
Gd		Si	27.6
Ge		Sn	0.03
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.24
Ir		Tl	
La		V	
Li		W	
Mg	0.73	Y	
Mn	0.67	Zn	0.015
Mo		Zr	
N			

Name MBH-55X G900J1 F
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0048
B		O	
Be	0.0011	P	
Bi	0.071	Pb	0.202
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0012	Ru	
Cu	0.91	S	
Fe	0.549	Sb	
Ga		Se	
Gd		Si	0.127
Ge		Sn	0.348
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0056
Ir		Tl	
La		V	0.0108
Li		W	
Mg	0.966	Y	
Mn	0.0133	Zn	0.152
Mo		Zr	0.0236
N			

Name MBH-55X G900J2 G
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.083
B		O	
Be	0.0035	P	
Bi	0.366	Pb	0.217
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.08	Ru	
Cu	0.726	S	
Fe	0.504	Sb	0.0374
Ga		Se	
Gd		Si	0.227
Ge		Sn	0.24
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.079
Ir		Tl	
La		V	
Li	(0.007)	W	
Mg	0.594	Y	
Mn	0.192	Zn	0.295
Mo		Zr	0.0637
N			

Name MBH-55X G900J3 F ↓
Description Aluminum-Silicon Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.21
B		O	
Be		P	
Bi		Pb	0.14
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.07	Rh	
Cr	0.25	Ru	
Cu	0.41	S	
Fe	0.29	Sb	(0.029)
Ga		Se	
Gd		Si	0.82
Ge		Sn	0.15
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.16
Ir		Tl	
La		V	
Li		W	
Mg	0.38	Y	
Mn	0.56	Zn	0.39
Mo		Zr	
N			

Aluminum

Name MBH-55X G900J4 F
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-55X G900J5 E
Description Aluminum-Silicon Alloy
Grade
UNS

Name MBH-58X G40H10 C
Description Aluminum-Zinc Alloy
Grade
UNS

Name MBH-58X G40H6 B ↓
Description Aluminum-Zinc Alloy
Grade
UNS

Name MBH-58X G40H7 B
Description Aluminum-Zinc Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.351
B		O	
Be		P	
Bi	0.285	Pb	0.088
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.343	Ru	
Cu	0.249	S	
Fe	0.306	Sb	
Ga		Se	
Gd		Si	1.39
Ge		Sn	0.153
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.171
Ir		Tl	
La		V	(0.01)
Li		W	
Mg	0.459	Y	
Mn	0.75	Zn	0.149
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.41
B		O	
Be		P	
Bi		Pb	0.014
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.46	Ru	
Cu	0.024	S	
Fe	0.18	Sb	
Ga		Se	
Gd		Si	1.65
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.33
Ir		Tl	
La		V	
Li		W	
Mg	0.009	Y	
Mn	1.16	Zn	0.023
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.097
B		O	
Be	(0.0003)	P	
Bi		Pb	0.044
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.05	Rh	
Cr	0.468	Ru	
Cu	0.188	S	
Fe	0.361	Sb	
Ga		Se	
Gd		Si	0.224
Ge		Sn	0.042
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.187
Ir		Tl	
La		V	
Li		W	
Mg	1.25	Y	
Mn	0.269	Zn	4.66
Mo		Zr	0.215
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.008
B		O	
Be	(0.002)	P	
Bi		Pb	(<0.002)
C		Pd	
Ca		Pr	
Cd	0.032	Pt	
Ce		Re	
Co	0.006	Rh	
Cr	0.005	Ru	
Cu	0.111	S	
Fe	0.08	Sb	<0.0005
Ga		Se	
Gd		Si	0.09
Ge		Sn	(<0.005)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.064
Ir		Tl	
La		V	
Li	(0.004)	W	
Mg	(0.003)	Y	
Mn	0.004	Zn	7.55
Mo		Zr	(0.004)
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.142
B		O	
Be	0.0012	P	
Bi		Pb	0.054
C		Pd	
Ca		Pr	
Cd	0.027	Pt	
Ce		Re	
Co	0.026	Rh	
Cr	0.0018	Ru	
Cu	0.05	S	
Fe	0.101	Sb	0.007
Ga		Se	
Gd		Si	0.161
Ge		Sn	0.067
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0045
Ir		Tl	
La		V	
Li	(0.0003)	W	
Mg	0.304	Y	
Mn	0.078	Zn	7.16
Mo		Zr	0.003
N			

Aluminum

Name MBH-58X G40H8 B
Description Aluminum-Zinc Alloy
Grade
UNS

Name MBH-58X G40H9 C
Description Aluminum-Zinc Alloy
Grade
UNS

Name MBH-59X G7022 A
Description Aluminum-Zinc Alloy
Grade AA 7022
UNS A97022

Name MBH-59X G7050 A
Description Aluminum-Zinc Alloy
Grade AA 7050
UNS A97050

Name MBH-59X G7068 A
Description Aluminum-Zinc Alloy
Grade AA 7068
UNS A97068

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.22
B		O	
Be		P	
Bi		Pb	0.09
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.22	Ru	
Cu	0.14	S	
Fe	0.3	Sb	
Ga		Se	
Gd		Si	0.1
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.063
Ir		Tl	
La		V	
Li		W	
Mg	0.69	Y	
Mn	0.2	Zn	6.5
Mo		Zr	(0.004)
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.062
B		O	
Be	(0.0001)	P	
Bi		Pb	0.19
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.015	Rh	
Cr	0.241	Ru	
Cu	0.172	S	
Fe	0.32	Sb	
Ga		Se	
Gd		Si	0.347
Ge		Sn	0.068
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.279
Ir		Tl	
La		V	
Li		W	
Mg	0.96	Y	
Mn	0.0372	Zn	4.83
Mo		Zr	0.157
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.003
B		O	
Be		P	
Bi		Pb	0.0019
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.14	Ru	
Cu	0.631	S	
Fe	0.12	Sb	
Ga		Se	
Gd		Si	0.126
Ge		Sn	0.0006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.016
Ir		Tl	
La		V	
Li		W	
Mg	2.69	Y	
Mn	0.127	Zn	5.17
Mo		Zr	0.0016
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0041
B	0.0011	O	
Be		P	
Bi		Pb	0.001
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0097	Ru	
Cu	2.119	S	
Fe	0.0745	Sb	
Ga		Se	
Gd		Si	0.045
Ge		Sn	0.001
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0242
Ir		Tl	
La		V	0.0092
Li		W	
Mg	2.03	Y	
Mn	0.0047	Zn	6.18
Mo		Zr	0.1
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0056
B		O	
Be		P	
Bi		Pb	0.002
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0324	Ru	
Cu	1.676	S	
Fe	0.117	Sb	
Ga		Se	
Gd		Si	0.051
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0419
Ir		Tl	
La		V	
Li		W	
Mg	2.7	Y	
Mn	0.0156	Zn	7.96
Mo		Zr	0.088
N			

Aluminum

Name MBH-59X G7075 B
Description Aluminum-Zinc Alloy
Grade AA 7075
UNS A97075

Name MBH-59X C77J1 C
Description Aluminum-Zinc Alloy
Grade
UNS

Name MBH-59X G77J2 E
Description Aluminum-Zinc Alloy
Grade
UNS

Name MBH-59X G77J3 F
Description Aluminum-Zinc Alloy
Grade
UNS

Name MBH-59X G77J4 E
Description Aluminum-Zinc Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0035
B	(0.003)	O	
Be		P	
Bi		Pb	0.0011
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.1831	Ru	
Cu	1.227	S	
Fe	0.122	Sb	
Ga	0.0105	Se	
Gd		Si	0.066
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0248
Ir		Tl	
La		V	0.0058
Li		W	
Mg	2.231	Y	
Mn	0.0229	Zn	5.49
Mo		Zr	0.0008
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.205
B		O	
Be		P	
Bi	0.0578	Pb	0.158
C		Pd	
Ca		Pr	
Cd	0.0351	Pt	
Ce		Re	
Co	0.0104	Rh	
Cr	0.297	Ru	
Cu	2.81	S	
Fe	0.209	Sb	
Ga	0.01	Se	
Gd		Si	0.1015
Ge		Sn	0.148
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.251
Ir		Tl	
La		V	0.0064
Li		W	
Mg	4.52	Y	
Mn	0.81	Zn	2.289
Mo		Zr	0.0484
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.527
B		O	
Be		P	
Bi		Pb	0.127
C		Pd	
Ca		Pr	
Cd	0.0023	Pt	
Ce		Re	
Co		Rh	
Cr	0.0966	Ru	
Cu	2.37	S	
Fe	0.293	Sb	
Ga		Se	
Gd		Si	0.206
Ge		Sn	0.0054
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0156
Ir		Tl	
La		V	0.0153
Li		W	
Mg	3.04	Y	
Mn	0.239	Zn	3.25
Mo		Zr	0.152
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.402
B		O	
Be		P	
Bi	0.0297	Pb	0.108
C		Pd	
Ca		Pr	
Cd	0.0095	Pt	
Ce		Re	
Co	0.032	Rh	
Cr	0.15	Ru	
Cu	1.3	S	
Fe	0.7	Sb	
Ga		Se	
Gd		Si	0.647
Ge		Sn	0.122
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.148
Ir		Tl	
La		V	0.0181
Li		W	
Mg	2.53	Y	
Mn	0.246	Zn	4.72
Mo		Zr	0.0144
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0037
B		O	
Be		P	
Bi		Pb	0.073
C		Pd	
Ca		Pr	
Cd	0.00054	Pt	
Ce		Re	
Co		Rh	
Cr	0.071	Ru	
Cu	0.81	S	
Fe	1.04	Sb	
Ga		Se	
Gd		Si	0.59
Ge		Sn	0.219
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.119
Ir		Tl	
La		V	0.0067
Li		W	
Mg	1.47	Y	
Mn	0.224	Zn	5.3
Mo		Zr	0.08
N			

Aluminum

Name MBH-59X G77J5 E
Description Aluminum-Zinc Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.002
B		O	
Be	0.0036	P	
Bi		Pb	0.0194
C		Pd	
Ca		Pr	
Cd	0.0142	Pt	
Ce		Re	
Co	0.0373	Rh	
Cr	0.0301	Ru	
Cu	0.0203	S	
Fe	1.37	Sb	
Ga		Se	
Gd		Si	0.562
Ge		Sn	0.014
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0255
Ir		Tl	
La		V	0.052
Li		W	
Mg	0.851	Y	
Mn	0.0398	Zn	7.82
Mo		Zr	0.0194
N			

Name MBH-59X G77J6 B ↓
Description Aluminum-Zinc Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.0248
B		O	
Be	0.0079	P	
Bi		Pb	0.0123
C		Pd	
Ca		Pr	
Cd	0.0015	Pt	
Ce		Re	
Co	0.0087	Rh	
Cr	0.0127	Ru	
Cu	1.08	S	
Fe	0.293	Sb	
Ga		Se	
Gd		Si	0.094
Ge		Sn	0.0267
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.02
Ir		Tl	
La		V	0.0107
Li		W	
Mg	2.6	Y	
Mn	0.0318	Zn	12.02
Mo		Zr	0.261
N			

Name MBH-518X 429 A ↓
Description Pressed Powder Aluminum Alloy
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.014
B	(0.002)	O	
Be		P	(0.004)
Bi		Pb	0.002
C		Pd	
Ca	0.02	Pr	
Cd		Pt	
Ce		Re	
Co	2.22	Rh	
Cr	0.0034	Ru	
Cu	1.023	S	
Fe	0.201	Sb	
Ga		Se	
Gd		Si	28.9
Ge		Sn	
H		Sr	0.0006
Hf		Ta	
Hg		Te	
In		Ti	0.0163
Ir		Tl	
La		V	0.009
Li		W	
Mg	1.25	Y	
Mn	0.0165	Zn	0.0042
Mo		Zr	
N			

Section 3

Brass

Name MBH-31X B10 M

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.358	Nb	
As	0.0087	Nd	
Au		Ni	1.475
B		O	
Be		P	
Bi	0.0215	Pb	0.0274
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.039	Rh	
Cr	0.0192	Ru	
Cu	60.18	S	
Fe	(1.39)	Sb	0.0124
Ga		Se	
Gd		Si	0.0389
Ge		Sn	0.031
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.205	Zn	36.05
Mo		Zr	
N			

Name MBH-31X B11 H ↓

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.0262	Nb	
As	0.0061	Nd	
Au		Ni	1.033
B		O	
Be		P	
Bi	0.0054	Pb	0.0134
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	60.72	S	
Fe	0.802	Sb	0.0057
Ga		Se	
Gd		Si	0.0063
Ge		Sn	0.0117
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.653	Zn	36.65
Mo		Zr	
N			

Name MBH-31X B12 G

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.081	Nb	
As	0.0181	Nd	
Au		Ni	0.491
B		O	
Be		P	
Bi	0.0198	Pb	0.0244
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	60.51	S	
Fe	0.43	Sb	0.0194
Ga		Se	
Gd		Si	0.0207
Ge		Sn	0.0229
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.72	Zn	36.67
Mo		Zr	
N			

Name MBH-31X B13 G

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.0148	Nb	
As	0.012	Nd	
Au		Ni	0.212
B		O	
Be		P	
Bi	0.0116	Pb	0.0188
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	60.03	S	
Fe	0.182	Sb	0.0056
Ga		Se	
Gd		Si	0.032
Ge		Sn	0.0127
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	2.84	Zn	36.67
Mo		Zr	
N			

Name MBH-31X B14 G

Description Alloyed Brass

Grade

UNS

Ag	0.013	Na	
Al	4.02	Nb	
As	0.0091	Nd	
Au		Ni	0.019
B		O	
Be		P	
Bi	0.0103	Pb	0.0104
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0109	Rh	
Cr		Ru	
Cu	58.85	S	
Fe	0.0183	Sb	0.0139
Ga		Se	
Gd		Si	0.051
Ge		Sn	0.486
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0117	Zn	36.52
Mo		Zr	
N			

Brass

Name MBH-31X B17 F

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	6.05	Nb	
As	(0.015)	Nd	
Au		Ni	(0.01)
B		O	
Be		P	
Bi	<0.001	Pb	(0.05)
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	60	S	
Fe	(0.02)	Sb	(<0.001)
Ga		Se	
Gd		Si	(0.007)
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.001)	Zn	(33.9)
Mo		Zr	
N			

Name MBH-31X B18 K ↓

Description Alloyed Brass

Grade

UNS

Ag	0.0143	Na	
Al	0.0193	Nb	
As	0.0215	Nd	
Au		Ni	0.0233
B		O	
Be		P	0.0195
Bi	0.0196	Pb	1.018
C		Pd	
Ca		Pr	
Cd	0.0254	Pt	
Ce		Re	
Co	0.0015	Rh	
Cr	(0.013)	Ru	
Cu	59.37	S	
Fe	0.0237	Sb	0.0205
Ga		Se	
Gd		Si	0.019
Ge		Sn	0.0117
H		Sr	
Hf		Ta	
Hg		Te	0.017
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0207	Zn	39.41
Mo		Zr	
N			

Name MBH-31X B19 S ◆

Description Alloyed Brass

Grade

UNS

Ag	0.0041	Na	
Al	0.015	Nb	
As	0.0214	Nd	
Au		Ni	0.0249
B	(<0.0003)	O	
Be		P	0.016
Bi	0.019	Pb	2.36
C		Pd	
Ca		Pr	
Cd	0.011	Pt	
Ce		Re	
Co	0.0007	Rh	
Cr	0.0012	Ru	
Cu	59.7	S	(0.003)
Fe	0.357	Sb	0.036
Ga		Se	0.001
Gd		Si	0.015
Ge		Sn	0.0556
H		Sr	
Hf		Ta	
Hg		Te	0.0012
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0194	Zn	37.3
Mo		Zr	
N			

Name MBH-31X B20 N

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.0025	Nb	
As	0.0028	Nd	
Au		Ni	0.021
B		O	
Be		P	0.023
Bi	0.0025	Pb	4.43
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	58.53	S	(0.004)
Fe	0.024	Sb	0.0039
Ga		Se	
Gd		Si	(0.005)
Ge		Sn	0.0244
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0005	Zn	37.03
Mo		Zr	
N			

Name MBH-31X B21 E ↓

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.0244	Nb	
As	0.0908	Nd	
Au		Ni	0.117
B		O	
Be		P	0.1269
Bi	0.104	Pb	0.113
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	69.32	S	(0.002)
Fe	0.126	Sb	0.105
Ga		Se	
Gd		Si	0.059
Ge		Sn	0.101
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0603	Zn	29.55
Mo		Zr	
N			

Brass

Name MBH-31X B22 F

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.0402	Nb	
As	0.165	Nd	
Au		Ni	0.154
B	0.0043	O	
Be		P	0.207
Bi	0.17	Pb	0.152
C		Pd	
Ca		Pr	
Cd	0.0117	Pt	
Ce		Re	
Co	0.139	Rh	
Cr		Ru	
Cu	82.47	S	0.03
Fe	0.158	Sb	0.161
Ga		Se	
Gd		Si	0.047
Ge		Sn	0.16
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	15.92
Mo		Zr	
N			

Name MBH-31X B23 D ↓

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.0048	Nb	
As	0.0482	Nd	
Au		Ni	0.047
B		O	
Be		P	0.03
Bi	0.0463	Pb	0.046
C		Pd	
Ca		Pr	
Cd	0.001	Pt	
Ce		Re	
Co	0.0472	Rh	
Cr		Ru	
Cu	89.57	S	0.053
Fe	0.06	Sb	0.0448
Ga		Se	
Gd		Si	0.0046
Ge		Sn	0.06
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0053	Zn	9.97
Mo		Zr	
N			

Name MBH-31X B24 D

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	(0.002)	Nb	
As	0.0116	Nd	
Au		Ni	0.134
B		O	
Be		P	0.0065
Bi	0.0126	Pb	0.05
C		Pd	
Ca		Pr	
Cd	0.0008	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	95.65	S	0.05
Fe	0.0342	Sb	0.118
Ga		Se	
Gd		Si	
Ge		Sn	1.93
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.003	Zn	1.99
Mo		Zr	
N			

Name MBH-31X B26 F

Description Alloyed Brass

Grade

UNS

Ag	0.053	Na	
Al	1.005	Nb	
As	0.126	Nd	
Au		Ni	1.397
B		O	
Be		P	0.0593
Bi	0.106	Pb	0.93
C		Pd	
Ca		Pr	
Cd	0.0147	Pt	
Ce		Re	
Co	0.1197	Rh	
Cr		Ru	
Cu	62.93	S	
Fe	0.65	Sb	0.098
Ga		Se	
Gd		Si	0.252
Ge		Sn	1.476
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.408	Zn	30.3
Mo		Zr	
N			

Name MBH-31X B29 A

Description Alloyed Brass

Grade

UNS

Ag		Na	
Al	0.219	Nb	
As		Nd	
Au		Ni	4.11
B		O	
Be		P	3.33
Bi		Pb	0.146
C		Pd	
Ca		Pr	
Cd	0.0144	Pt	
Ce		Re	
Co		Rh	
Cr	0.062	Ru	
Cu	67.08	S	
Fe	0.144	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.0328
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0625	Zn	24.75
Mo		Zr	
N			

Brass

Name MBH-31X BIB1 D

Description Bismuth Brass

Grade

UNS

Ag		Na	
Al	0.124	Nb	
As	0.0303	Nd	
Au		Ni	0.255
B		O	
Be		P	0.0451
Bi	1.87	Pb	0.157
C		Pd	
Ca		Pr	
Cd	0.01	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	59.57	S	(0.001)
Fe	0.053	Sb	0.0106
Ga		Se	0.0031
Gd		Si	0.169
Ge		Sn	0.463
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0273	Zn	37.2
Mo		Zr	
N			

Name MBH-31X BIB2 E ↓

Description Bismuth Brass

Grade

UNS

Ag		Na	
Al	0.504	Nb	
As	0.0224	Nd	
Au		Ni	0.55
B		O	
Be		P	0.0232
Bi	1.031	Pb	0.118
C		Pd	
Ca		Pr	
Cd	0.0055	Pt	
Ce		Re	
Co	0.0437	Rh	
Cr		Ru	
Cu	61.12	S	(<0.001)
Fe	0.143	Sb	0.087
Ga		Se	0.0027
Gd		Si	0.151
Ge		Sn	1.267
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	35.01
Mo		Zr	
N			

Name MBH-31X BIB3 C

Description Bismuth Brass

Grade

UNS

Ag		Na	
Al	0.154	Nb	
As	0.0476	Nd	
Au		Ni	0.127
B		O	
Be		P	0.0626
Bi	4.04	Pb	0.181
C		Pd	
Ca		Pr	
Cd	0.0014	Pt	
Ce		Re	
Co	0.0032	Rh	
Cr		Ru	
Cu	63.18	S	0.0018
Fe	0.051	Sb	0.0321
Ga		Se	0.0047
Gd		Si	0.0516
Ge		Sn	0.198
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	31.83
Mo		Zr	
N			

Name MBH-31X BIB4 C

Description Bismuth Brass

Grade

UNS

Ag		Na	
Al	0.412	Nb	
As	0.0131	Nd	
Au		Ni	0.199
B	0.0017	O	
Be		P	0.0373
Bi	0.851	Pb	0.092
C		Pd	
Ca		Pr	
Cd	0.0028	Pt	
Ce		Re	
Co	0.0291	Rh	
Cr		Ru	
Cu	62.45	S	
Fe	0.123	Sb	0.0477
Ga		Se	0.0133
Gd		Si	0.203
Ge		Sn	0.85
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0146	Zn	34.69
Mo		Zr	
N			

Name MBH-31X BiB4 D ♦

Description Bismuth Brass

Grade

UNS

Ag	0.0014	Na	
Al	0.435	Nb	
As	0.0095	Nd	
Au		Ni	0.211
B	0.0019	O	
Be		P	0.039
Bi	0.8	Pb	0.096
C		Pd	
Ca		Pr	
Cd	0.0022	Pt	
Ce		Re	
Co	0.0108	Rh	
Cr	0.0006	Ru	
Cu	62.9	S	(0.005)
Fe	0.094	Sb	0.022
Ga		Se	0.0011
Gd		Si	0.06
Ge		Sn	0.58
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.00082	Zn	34.8
Mo		Zr	
N			

Brass

Name MBH-31X B1 Q ↓
Description Copper-Zinc Binary
Grade
UNS

Ag		Na	
Al	(0.001)	Nb	
As	0.007	Nd	
Au		Ni	0.02
B	0.0007	O	
Be		P	0.0385
Bi	0.0183	Pb	0.0155
C		Pd	
Ca		Pr	
Cd	0.0018	Pt	
Ce		Re	
Co	0.0015	Rh	
Cr	0.0091	Ru	
Cu	54.99	S	
Fe	0.0223	Sb	0.0075
Ga		Se	
Gd		Si	(0.007)
Ge		Sn	0.0279
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0079	Zn	44.82
Mo		Zr	
N			

Name MBH-31X B3 M
Description Copper-Zinc Binary
Grade
UNS

Ag	0.0247	Na	
Al	0.074	Nb	
As	0.0196	Nd	
Au		Ni	0.0259
B	0.0022	O	
Be		P	0.0421
Bi	0.0149	Pb	0.0299
C		Pd	
Ca		Pr	
Cd	0.004	Pt	
Ce		Re	
Co	0.0109	Rh	
Cr		Ru	
Cu	64.58	S	
Fe	0.0264	Sb	0.0205
Ga		Se	
Gd		Si	
Ge		Sn	0.0202
H		Sr	
Hf		Ta	
Hg		Te	0.0098
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0296	Zn	35.01
Mo		Zr	
N			

Name MBH-31X B3 N
Description Copper-Zinc Binary
Grade
UNS

Ag	0.0152	Na	
Al		Nb	
As	0.0104	Nd	
Au		Ni	0.0171
B	0.0008	O	
Be		P	0.0366
Bi	0.0152	Pb	0.085
C		Pd	
Ca		Pr	
Cd	0.0027	Pt	
Ce		Re	
Co	0.0066	Rh	
Cr		Ru	
Cu	64.56	S	
Fe	0.0408	Sb	0.0148
Ga		Se	
Gd		Si	
Ge		Sn	0.0394
H		Sr	
Hf		Ta	
Hg		Te	0.0056
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.029	Zn	35.05
Mo		Zr	
N			

Name MBH-31X B4 N
Description Copper-Zinc Binary
Grade
UNS

Ag		Na	
Al		Nb	
As	0.055	Nd	
Au		Ni	0.01
B		O	
Be		P	0.008
Bi	0.015	Pb	0.08
C		Pd	
Ca		Pr	
Cd	0.035	Pt	
Ce		Re	
Co	0.008	Rh	
Cr	0.002	Ru	
Cu	[bal]	S	0.005
Fe	0.025	Sb	0.007
Ga		Se	
Gd		Si	0.03
Ge		Sn	0.05
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.03	Zn	30.5
Mo		Zr	
N			

Name MBH-31X B5 L
Description Copper-Zinc Binary
Grade
UNS

Ag		Na	
Al	0.0138	Nb	
As	0.0357	Nd	
Au		Ni	0.0275
B	(0.001)	O	
Be		P	
Bi	0.0088	Pb	0.084
C		Pd	
Ca		Pr	
Cd	0.004	Pt	
Ce		Re	
Co	0.025	Rh	
Cr		Ru	
Cu	75.38	S	
Fe	0.038	Sb	0.016
Ga		Se	
Gd		Si	(0.005)
Ge		Sn	0.266
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.002)	Zn	23.98
Mo		Zr	
N			

Brass

Name MBH-31X B6 K ↓
Description Copper-Zinc Binary
Grade
UNS

Ag		Na	
Al	0.001	Nb	
As	0.0009	Nd	
Au		Ni	0.0066
B	0.0023	O	
Be		P	
Bi	0.001	Pb	0.0122
C		Pd	
Ca		Pr	
Cd	0.0037	Pt	
Ce		Re	
Co	0.0063	Rh	
Cr	(<0.0005)	Ru	
Cu	79.9	S	
Fe	0.0097	Sb	0.0011
Ga		Se	
Gd		Si	0.015
Ge		Sn	0.0029
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0039	Zn	19.93
Mo		Zr	
N			

Name MBH-31X B7 L
Description Copper-Zinc Binary
Grade
UNS

Ag		Na	
Al	0.0435	Nb	
As	0.0054	Nd	
Au		Ni	0.0351
B	0.0013	O	
Be		P	
Bi	0.0607	Pb	0.0416
C		Pd	
Ca		Pr	
Cd	0.0064	Pt	
Ce		Re	
Co	0.0044	Rh	
Cr		Ru	
Cu	84.22	S	
Fe	0.099	Sb	0.0196
Ga		Se	
Gd		Si	0.018
Ge		Sn	0.089
H		Sr	
Hf		Ta	
Hg		Te	(0.002)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0088	Zn	15.34
Mo		Zr	
N			

Name MBH-31X B8 J
Description Copper-Zinc Binary
Grade
UNS

Ag		Na	
Al	(0.001)	Nb	
As	0.0074	Nd	
Au		Ni	0.0421
B		O	
Be		P	0.0026
Bi	0.03	Pb	0.082
C		Pd	
Ca		Pr	
Cd	0.0155	Pt	
Ce		Re	
Co	0.0072	Rh	
Cr	(0.001)	Ru	
Cu	89.37	S	0.045
Fe	0.132	Sb	0.0254
Ga		Se	
Gd		Si	(0.002)
Ge		Sn	0.0311
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0006	Zn	10.23
Mo		Zr	
N			

Name MBH-31X B9 M
Description Copper-Zinc Binary
Grade
UNS

Ag	0.0065	Na	
Al	(0.001)	Nb	
As	0.0103	Nd	
Au		Ni	0.0379
B	(0.001)	O	
Be		P	0.0047
Bi	0.0059	Pb	0.09
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	94.81	S	
Fe	0.0361	Sb	0.0089
Ga		Se	
Gd		Si	
Ge		Sn	0.062
H		Sr	
Hf		Ta	
Hg		Te	0.0181
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0006	Zn	4.92
Mo		Zr	
N			

Name IARM-73C ↓
Description Free Cutting Brass
Grade CDA 360
UNS C36000

Ag	0.006	Na	
Al	(0.001)	Nb	(0.001)
As	0.005	Nd	
Au		Ni	0.095
B	(0.0004)	O	(0.0003)
Be		P	0.003
Bi	0.011	Pb	2.97
C	(0.003)	Pd	
Ca		Pr	
Cd	0.0014	Pt	
Ce		Re	
Co	0.002	Rh	
Cr	0.001	Ru	
Cu	61.3	S	0.002
Fe	0.199	Sb	0.008
Ga		Se	
Gd		Si	0.003
Ge		Sn	0.256
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.001)	Y	
Mn	0.003	Zn	35.1
Mo		Zr	
N			

Brass

Name IARM-Cu360-18
Description Free Cutting Brass
Grade CDA 360
UNS C36000

Name MBH-31X HT31 B
Description High Tensile Brass
Grade
UNS

Name MBH-31X HT37 A
Description High Tensile Brass
Grade
UNS

Name MBH-31X HT38 A ↓
Description High Tensile Brass
Grade
UNS

Name MBH-31X 7835.1 U
Description Leaded Brass
Grade
UNS

Ag	0.011	Na	
Al	0.01	Nb	(<0.001)
As	0.026	Nd	
Au		Ni	0.12
B	(0.002)	O	(0.001)
Be		P	0.003
Bi	0.0023	Pb	2.73
C	0.003	Pd	(0.0001)
Ca		Pr	
Cd	0.0034	Pt	
Ce		Re	
Co	0.001	Rh	
Cr	0.003	Ru	
Cu	61.6	S	(<0.0005)
Fe	0.27	Sb	0.012
Ga		Se	(<0.0030)
Gd		Si	0.01
Ge		Sn	0.29
H	(<0.001)	Sr	
Hf		Ta	
Hg		Te	(0.0003)
In		Ti	(<0.0020)
Ir		Tl	
La		V	(<0.010)
Li		W	
Mg	(0.00007)	Y	
Mn	0.0131	Zn	35.1
Mo	(<0.0001)	Zr	
N	(<0.001)		

Ag		Na	
Al	6.82	Nb	
As	0.0005	Nd	
Au		Ni	0.226
B	0.0014	O	
Be		P	0.003
Bi		Pb	0.0139
C	0.0057	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	67	S	0.0007
Fe	3.01	Sb	
Ga		Se	
Gd		Si	0.0443
Ge		Sn	0.079
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	5.69	Zn	17.06
Mo		Zr	
N			

Ag		Na	
Al	0.0004	Nb	
As	0.0011	Nd	
Au		Ni	0.0105
B		O	
Be		P	0.003
Bi		Pb	0.623
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	60.33	S	(<0.0005)
Fe	0.0344	Sb	0.0007
Ga		Se	
Gd		Si	1.38
Ge		Sn	0.0116
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	2.88	Zn	34.69
Mo		Zr	
N			

Ag		Na	
Al	0.96	Nb	
As	0.0008	Nd	
Au		Ni	0.0242
B		O	
Be		P	0.0024
Bi		Pb	0.051
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	58.77	S	(0.001)
Fe	0.053	Sb	(0.0006)
Ga		Se	
Gd		Si	0.869
Ge		Sn	0.039
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	2.6	Zn	36.66
Mo		Zr	
N			

Ag	0.009	Na	
Al	0.02	Nb	
As	0.014	Nd	
Au		Ni	0.12
B		O	
Be		P	0.05
Bi	0.008	Pb	2.77
C		Pd	
Ca		Pr	
Cd	0.0037	Pt	
Ce		Re	
Co	0.009	Rh	
Cr		Ru	
Cu	[bal]	S	
Fe	0.175	Sb	0.016
Ga		Se	
Gd		Si	0.018
Ge		Sn	0.44
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.011	Zn	33.5
Mo		Zr	
N			

Brass

Name MBH-31X 7835.2 K ↓

Description Leaded Brass

Grade

UNS

Ag	0.0102	Na	
Al	0.06	Nb	
As	0.028	Nd	
Au		Ni	0.0462
B	0.0023	O	
Be		P	0.0226
Bi	0.0099	Pb	2.07
C		Pd	
Ca		Pr	
Cd	0.002	Pt	
Ce		Re	
Co	0.029	Rh	
Cr		Ru	
Cu	64.49	S	
Fe	0.0309	Sb	0.0358
Ga		Se	
Gd		Si	0.0193
Ge		Sn	0.152
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	32.94
Mo		Zr	
N			

Name MBH-31X 7835.2 L

Description Leaded Brass

Grade

UNS

Ag	0.015	Na	
Al	0.136	Nb	
As	0.069	Nd	
Au		Ni	0.051
B	0.0012	O	
Be		P	0.08
Bi	0.013	Pb	2.07
C		Pd	
Ca		Pr	
Cd	0.004	Pt	
Ce		Re	
Co	0.0036	Rh	
Cr		Ru	
Cu	63.7	S	
Fe	0.25	Sb	0.073
Ga		Se	
Gd		Si	0.023
Ge		Sn	0.206
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	33.4
Mo		Zr	
N			

Name MBH-31X 7835.3 K

Description Leaded Brass

Grade

UNS

Ag	0.021	Na	
Al	0.485	Nb	
As	0.059	Nd	
Au		Ni	0.15
B		O	
Be		P	0.035
Bi	0.029	Pb	1.7
C		Pd	
Ca		Pr	
Cd	0.006	Pt	
Ce		Re	
Co	0.007	Rh	
Cr		Ru	
Cu	[bal]	S	
Fe	0.49	Sb	0.061
Ga		Se	
Gd		Si	0.07
Ge		Sn	0.355
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.048	Zn	36.5
Mo		Zr	
N			

Name MBH-31X 7835.4 K

Description Leaded Brass

Grade

UNS

Ag		Na	
Al	0.16	Nb	
As	0.057	Nd	
Au		Ni	0.1
B	0.002	O	
Be		P	0.16
Bi	0.018	Pb	0.97
C		Pd	
Ca		Pr	
Cd	0.009	Pt	
Ce		Re	
Co	0.007	Rh	
Cr		Ru	
Cu	[bal]	S	
Fe	0.24	Sb	0.03
Ga		Se	
Gd		Si	
Ge		Sn	0.21
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.027	Zn	37.9
Mo		Zr	
N			

Name MBH-31X 7835.5 A ↓

Description Leaded Brass

Grade

UNS

Ag		Na	
Al	0.078	Nb	
As	0.104	Nd	
Au		Ni	0.249
B		O	
Be		P	0.018
Bi		Pb	1.64
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	91.25	S	
Fe	0.126	Sb	0.114
Ga		Se	
Gd		Si	
Ge		Sn	0.116
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	6.23
Mo		Zr	
N			

Brass

Name MBH-31X 7835.6 D

Description Leaded Brass

Grade

UNS

Ag	0.005	Na	
Al	0.63	Nb	
As	0.007	Nd	
Au		Ni	0.06
B	0.004	O	
Be		P	0.04
Bi	0.004	Pb	1.29
C		Pd	
Ca		Pr	
Cd	0.0017	Pt	
Ce		Re	
Co	0.006	Rh	
Cr		Ru	
Cu	[bal]	S	
Fe	0.12	Sb	
Ga		Se	
Gd		Si	0.01
Ge		Sn	0.71
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	37
Mo		Zr	
N			

Name MBH-31X 7835.7 A

Description Leaded Brass

Grade

UNS

Ag		Na	
Al	0.0084	Nb	
As		Nd	
Au		Ni	0.943
B		O	
Be		P	0.08
Bi	0.048	Pb	2.29
C		Pd	
Ca		Pr	
Cd	0.0047	Pt	
Ce		Re	
Co	0.012	Rh	
Cr		Ru	
Cu	88.87	S	0.0075
Fe	0.03	Sb	0.0327
Ga		Se	
Gd		Si	0.039
Ge		Sn	0.137
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	7.5
Mo		Zr	
N			

Name MBH-31X 7835.8 B

Description Leaded Brass

Grade

UNS

Ag	0.549	Na	
Al	0.219	Nb	
As	0.151	Nd	
Au		Ni	0.157
B		O	
Be		P	0.154
Bi	0.101	Pb	3.22
C		Pd	
Ca		Pr	
Cd	0.0944	Pt	
Ce		Re	
Co	0.313	Rh	
Cr		Ru	
Cu	72.7	S	
Fe	0.0446	Sb	0.11
Ga		Se	
Gd		Si	
Ge		Sn	0.451
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0102	Zn	21.55
Mo		Zr	
N			

Name MBH-31X 7835.9 B

Description Leaded Brass

Grade

UNS

Ag	2.014	Na	
Al	0.119	Nb	
As	0.101	Nd	
Au		Ni	0.196
B		O	
Be		P	0.0627
Bi	0.91	Pb	1.045
C		Pd	
Ca		Pr	
Cd	0.0586	Pt	
Ce		Re	
Co	0.113	Rh	
Cr		Ru	
Cu	76.6	S	0.02
Fe	0.191	Sb	0.44
Ga		Se	0.3
Gd		Si	0.0471
Ge		Sn	1.6
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0045	Zn	16.26
Mo		Zr	
N			

Name MBH-31X CZ114 A

Description Leaded Brass

Grade

UNS

Ag		Na	
Al	0.714	Nb	
As		Nd	
Au		Ni	0.0183
B		O	
Be		P	0.0018
Bi	0.0107	Pb	1.219
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	57.1	S	
Fe	0.74	Sb	(0.003)
Ga		Se	
Gd		Si	(0.006)
Ge		Sn	0.511
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.475	Zn	38.25
Mo		Zr	
N			

Brass

Name MBH-31X CZ115 A

Description Leaded Brass

Grade

UNS

Ag	0.0041	Na	
Al	0.0007	Nb	
As	0.0008	Nd	
Au		Ni	0.0143
B		O	
Be		P	0.0091
Bi		Pb	1.169
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	57.19	S	
Fe	0.601	Sb	0.002
Ga		Se	
Gd		Si	(<0.005)
Ge		Sn	0.729
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.095	Zn	39.2
Mo		Zr	
N			

Name MBH-31X CZ121 A

Description Leaded Brass

Grade

UNS

Ag	0.006	Na	
Al	0.0034	Nb	
As	0.0299	Nd	
Au		Ni	0.1028
B		O	
Be		P	0.0028
Bi	0.0046	Pb	3.01
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	57.84	S	
Fe	0.167	Sb	0.005
Ga		Se	
Gd		Si	(0.003)
Ge		Sn	0.194
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0052	Zn	38.57
Mo		Zr	
N			

Name MBH-31X CZ122 A

Description Leaded Brass

Grade

UNS

Ag	0.003	Na	
Al		Nb	
As	0.15	Nd	
Au		Ni	0.0261
B		O	
Be		P	
Bi		Pb	1.97
C		Pd	
Ca		Pr	
Cd	0.0011	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	61.51	S	
Fe	0.066	Sb	0.0088
Ga		Se	
Gd		Si	(0.001)
Ge		Sn	0.0866
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.00097	Zn	36.21
Mo		Zr	
N			

Name MBH-31X CZ132 A

Description Leaded Brass

Grade

UNS

Ag	0.005	Na	
Al	0.0007	Nb	
As	0.0119	Nd	
Au		Ni	0.051
B		O	
Be		P	
Bi		Pb	2.05
C		Pd	
Ca		Pr	
Cd	0.0012	Pt	
Ce		Re	
Co	0.0009	Rh	
Cr		Ru	
Cu	57.63	S	0.0008
Fe	0.165	Sb	0.0054
Ga		Se	
Gd		Si	(0.004)
Ge		Sn	0.16
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0007	Zn	39.9
Mo		Zr	
N			

Name ARMI-Cu844-18 ♦

Description Leaded Red Brass

Grade

UNS

Ag	0.0133	Na	
Al	0.001	Nb	
As	0.0041	Nd	
Au		Ni	0.209
B		O	(<0.0017)
Be		P	0.0018
Bi	0.03	Pb	6.7
C		Pd	
Ca		Pr	
Cd	0.0008	Pt	
Ce		Re	
Co	0.0015	Rh	
Cr	0.0005	Ru	
Cu	80.5	S	0.023
Fe	0.03	Sb	0.037
Ga		Se	0.004
Gd		Si	(0.001)
Ge		Sn	3.08
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(<0.0065)	Y	
Mn	(0.0003)	Zn	9.5
Mo		Zr	
N			

Brass

Name ARMI-CU836-18 ♦
Description Leaded Semi-Red Brass
Grade CDA 836
UNS C83600

Name IARM-226A ↓
Description Lead-Free Casting Alloy
Grade EnviroBrass II
UNS C89520M

Name IARM-227A
Description Lead-Free Casting Alloy
Grade EnviroBrass II
UNS C89520M

Name IARM-228A
Description Lead-Free Casting Alloy
Grade EnviroBrass II
UNS C89520M

Name MBH-31X B10 N ♦
Description Majors Elements in Brass
Grade
UNS

Ag	0.0292	Na	
Al	(0.004)	Nb	0.002
As	0.0098	Nd	
Au		Ni	0.423
B		O	(0.001)
Be		P	0.028
Bi	0.035	Pb	4.9
C		Pd	
Ca		Pr	
Cd	0.0014	Pt	
Ce		Re	
Co	0.0026	Rh	
Cr	(0.0007)	Ru	
Cu	84.5	S	0.041
Fe	0.049	Sb	0.103
Ga		Se	0.0016
Gd		Si	(0.003)
Ge		Sn	5.02
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.0002)	Zn	5.09
Mo		Zr	
N			

Ag	0.004	Na	
Al	0.002	Nb	
As	0.003	Nd	
Au		Ni	0.54
B		O	(0.001)
Be		P	0.005
Bi	1.7	Pb	0.04
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.001	Rh	
Cr	(0.001)	Ru	
Cu	86.7	S	0.005
Fe	0.054	Sb	0.004
Ga		Se	0.93
Gd		Si	0.002
Ge		Sn	5.1
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.002	Zn	4.8
Mo		Zr	
N	(<0.0005)		

Ag	0.004	Na	
Al	0.002	Nb	
As	0.003	Nd	
Au		Ni	0.53
B		O	0.0013
Be		P	0.003
Bi	2.3	Pb	0.042
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.001	Rh	
Cr	(0.001)	Ru	
Cu	85.9	S	0.005
Fe	0.06	Sb	(<0.01)
Ga		Se	1.21
Gd		Si	0.002
Ge		Sn	5.1
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.001	Zn	4.7
Mo		Zr	
N	(0.0002)		

Ag	0.003	Na	
Al	0.002	Nb	
As	0.003	Nd	
Au		Ni	0.45
B		O	(0.002)
Be		P	0.032
Bi	1.53	Pb	0.026
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.001	Rh	
Cr	0.001	Ru	
Cu	89	S	0.004
Fe	0.052	Sb	0.01
Ga		Se	0.67
Gd		Si	0.002
Ge		Sn	4.1
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.001	Zn	4.1
Mo		Zr	
N	(<0.0005)		

Ag	0.003	Na	
Al	0.149	Nb	
As	0.0099	Nd	
Au		Ni	1.56
B		O	
Be		P	0.033
Bi	0.021	Pb	0.022
C		Pd	
Ca		Pr	
Cd	0.0005	Pt	
Ce		Re	
Co	0.0062	Rh	
Cr	0.0006	Ru	
Cu	60.9	S	
Fe	0.135	Sb	0.0207
Ga		Se	0.0009
Gd		Si	0.012
Ge		Sn	0.047
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.16	Zn	36.6
Mo		Zr	
N			

Brass

Name MBH-31X B22 G ◆

Description Majors Elements in Brass

Grade

UNS

Ag	0.0015	Na	
Al	0.1	Nb	
As	0.15	Nd	
Au		Ni	0.142
B	0.0029	O	
Be		P	0.214
Bi	0.148	Pb	0.197
C		Pd	
Ca		Pr	
Cd	0.013	Pt	
Ce		Re	
Co	0.059	Rh	
Cr	0.0006	Ru	
Cu	80.5	S	(0.005)
Fe	0.107	Sb	0.147
Ga		Se	0.0007
Gd		Si	0.152
Ge		Sn	0.225
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.00076	Zn	17.8
Mo		Zr	
N			

Name MBH-31X MNB3 F

Description Manganese Brass

Grade

UNS

Ag	0.005	Na	
Al	1.4	Nb	
As	0.045	Nd	
Au		Ni	0.38
B		O	
Be		P	0.055
Bi		Pb	0.52
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.038	Rh	
Cr	0.038	Ru	
Cu	[bal]	S	
Fe	1.25	Sb	0.045
Ga		Se	
Gd		Si	1.65
Ge		Sn	0.42
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	2.1	Zn	25.5
Mo		Zr	
N			

Name MBH-31X MNB4 F

Description Manganese Brass

Grade

UNS

Ag	0.0131	Na	
Al	3.91	Nb	
As	0.0125	Nd	
Au		Ni	0.347
B		O	
Be		P	0.0274
Bi		Pb	0.221
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0312	Rh	
Cr		Ru	
Cu	64.62	S	
Fe	1.728	Sb	0.0189
Ga		Se	
Gd		Si	0.103
Ge		Sn	0.547
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	2.97	Zn	25.59
Mo		Zr	
N			

Name MBH-31X MNB5 Q

Description Manganese Brass

Grade

UNS

Ag	0.0063	Na	
Al	2.96	Nb	
As	0.01	Nd	
Au		Ni	0.996
B		O	
Be		P	(0.008)
Bi		Pb	0.243
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0155	Rh	
Cr	0.19	Ru	
Cu	56.18	S	
Fe	0.013	Sb	0.0118
Ga		Se	
Gd		Si	0.44
Ge		Sn	1.6
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.137	Zn	37.12
Mo		Zr	
N			

Name MBH-31X MNB5 R ↓

Description Manganese Brass

Grade

UNS

Ag	0.0195	Na	
Al	3.24	Nb	
As	0.0021	Nd	
Au		Ni	1.32
B		O	
Be		P	0.0399
Bi		Pb	0.157
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.066	Rh	
Cr	0.0116	Ru	
Cu	55.14	S	
Fe	0.898	Sb	(0.006)
Ga		Se	
Gd		Si	0.528
Ge		Sn	1.228
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.175	Zn	37.11
Mo		Zr	
N			

Brass

Name MBH-31X MNB6 C
Description Manganese Brass
Grade
UNS

Ag	0.0509	Na	
Al	0.0148	Nb	
As	0.0107	Nd	
Au		Ni	0.261
B		O	
Be		P	0.0226
Bi		Pb	0.016
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0107	Rh	
Cr		Ru	
Cu	70.01	S	
Fe	0.0697	Sb	0.0128
Ga		Se	
Gd		Si	0.0196
Ge		Sn	0.031
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.871	Zn	28.53
Mo		Zr	
N			

Name MBH-31X CZ112 A
Description Naval Brass
Grade
UNS

Ag	0.0043	Na	
Al	(0.001)	Nb	
As	0.0052	Nd	
Au		Ni	0.015
B		O	
Be		P	0.0136
Bi		Pb	0.458
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	61.24	S	
Fe	0.0488	Sb	0.0043
Ga		Se	
Gd		Si	(0.003)
Ge		Sn	1.13
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.001	Zn	37.07
Mo		Zr	
N			

Name MBH-31X NB1 H
Description Naval Brass
Grade
UNS

Ag		Na	
Al	(0.0004)	Nb	
As	0.161	Nd	
Au		Ni	0.52
B		O	
Be		P	0.0223
Bi	0.0065	Pb	0.504
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.0006)	Rh	
Cr		Ru	
Cu	68.35	S	0.0024
Fe	0.037	Sb	0.0057
Ga		Se	
Gd		Si	0.004
Ge		Sn	0.535
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.051	Zn	29.73
Mo		Zr	
N			

Name MBH-31X NB2 H
Description Naval Brass
Grade
UNS

Ag		Na	
Al	0.168	Nb	
As	0.097	Nd	
Au		Ni	0.0578
B		O	
Be		P	0.0139
Bi	0.1	Pb	0.239
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	62.21	S	0.0019
Fe	0.112	Sb	0.099
Ga		Se	
Gd		Si	0.107
Ge		Sn	1.009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.151	Zn	35.47
Mo		Zr	
N			

Name MBH-31X NB3 J
Description Naval Brass
Grade
UNS

Ag	0.0464	Na	
Al	0.13	Nb	
As	0.0559	Nd	
Au		Ni	0.0599
B	0.0028	O	
Be		P	0.203
Bi	0.0786	Pb	0.127
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	72.86	S	(0.004)
Fe	0.071	Sb	0.197
Ga		Se	
Gd		Si	0.127
Ge		Sn	1.38
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.124	Zn	24.46
Mo		Zr	
N			

Brass

Name MBH-31X NB4 J ↓

Description Naval Brass

Grade

UNS

Ag		Na	
Al	0.178	Nb	
As	0.0062	Nd	
Au		Ni	0.23
B	0.0009	O	
Be		P	0.23
Bi	0.104	Pb	0.067
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	63.71	S	(0.0032)
Fe	0.235	Sb	0.45
Ga		Se	
Gd		Si	0.203
Ge		Sn	2.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0053	Zn	32.57
Mo		Zr	
N			

Name IARM-76A ↓

Description Naval Brass - High Leaded

Grade CDA 485

UNS C48500

Ag	(0.002)	Na	
Al	(<0.01)	Nb	
As		Nd	
Au		Ni	0.03
B		O	
Be		P	0.005
Bi		Pb	1.8
C	(0.031)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	0.002
Fe	0.08	Sb	(<0.01)
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	0.99
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.01)	Zn	36.14
Mo		Zr	
N			

Name IARM-76D

Description Naval Brass - High Leaded

Grade CDA 485

UNS C48500

Ag	0.0014	Na	
Al	0.002	Nb	(<0.002)
As	0.004	Nd	
Au		Ni	0.003
B	(<0.001)	O	(0.0006)
Be	0.0006	P	0.0018
Bi	0.0011	Pb	1.69
C	0.002	Pd	
Ca		Pr	
Cd	0.001	Pt	
Ce		Re	
Co	0.001	Rh	
Cr	0.0006	Ru	
Cu	60.7	S	0.0012
Fe	0.013	Sb	0.004
Ga		Se	(<0.001)
Gd		Si	0.0037
Ge		Sn	0.73
H		Sr	
Hf		Ta	
Hg		Te	(<0.0009)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0005	Y	
Mn	0.0006	Zn	36.8
Mo		Zr	(<0.0001)
N	(<0.001)		

Name IARM-75A ↓

Description Naval Brass - Medium Leaded

Grade CDA 482

UNS C48200

Ag		Na	
Al	(<0.01)	Nb	
As	(<0.01)	Nd	
Au		Ni	0.025
B		O	
Be		P	0.005
Bi		Pb	0.83
C	(0.01)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	(59.79)	S	0.002
Fe	0.052	Sb	(<0.01)
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	0.89
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.01)	Zn	38.39
Mo		Zr	
N			

Name IARM-75B

Description Naval Brass - Medium Leaded

Grade CDA 482

UNS C48200

Ag	(0.005)	Na	
Al	(0.005)	Nb	
As	(0.004)	Nd	
Au		Ni	0.02
B		O	
Be		P	0.003
Bi	(0.001)	Pb	0.63
C	(0.004)	Pd	
Ca		Pr	
Cd	(0.002)	Pt	
Ce		Re	
Co	(0.003)	Rh	
Cr		Ru	
Cu	60.63	S	(0.001)
Fe	0.06	Sb	(0.004)
Ga		Se	
Gd		Si	(0.003)
Ge		Sn	0.59
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.003)	Zn	37.98
Mo		Zr	
N			

Brass

Name	IARM-75C
Description	Naval Brass - Medium Leaded
Grade	CDA 482
UNS	C48200

Name	IARM-74A ↓
Description	Naval Brass - Uninhibited
Grade	CDA 464
UNS	C46400

Name	IARM-74B ↓
Description	Naval Brass - Uninhibited
Grade	CDA 464
UNS	C46400

Name	IARM-151A ↓
Description	Silicon Brass
Grade	CDA 875
UNS	C87500

Name	IARM-151B
Description	Silicon Brass
Grade	CDA 875
UNS	C87500

Ag	(0.004)	Na	
Al	(0.003)	Nb	(<0.001)
As	0.005	Nd	
Au		Ni	0.013
B	(<0.1)	O	(0.0007)
Be	(<0.001)	P	0.004
Bi	0.0012	Pb	0.42
C	(0.002)	Pd	
Ca		Pr	
Cd	0.0015	Pt	
Ce		Re	
Co	0.0007	Rh	
Cr	0.0009	Ru	
Cu	60.7	S	0.0015
Fe	0.06	Sb	0.007
Ga		Se	(0.005)
Gd		Si	0.005
Ge		Sn	0.69
H		Sr	
Hf		Ta	
Hg		Te	(0.003)
In		Ti	38.1
Ir		Tl	
La		V	
Li		W	
Mg	(0.0003)	Y	
Mn	0.0024	Zn	
Mo		Zr	(<0.001)
N	(0.0006)		

Ag	(0.002)	Na	
Al	(<0.01)	Nb	
As	(<0.01)	Nd	
Au		Ni	0.01
B		O	
Be		P	0.006
Bi		Pb	0.02
C	(0.012)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	0.001
Fe	0.01	Sb	(<0.01)
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	0.5
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.01)	Zn	38.14
Mo		Zr	
N			

Ag	(0.005)	Na	
Al	0.003	Nb	
As	(<0.01)	Nd	
Au		Ni	0.006
B		O	
Be		P	(0.008)
Bi	(<0.005)	Pb	0.017
C		Pd	
Ca		Pr	
Cd	(0.002)	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	60.4	S	(0.003)
Fe	0.011	Sb	0.003
Ga		Se	
Gd		Si	0.003
Ge		Sn	0.7
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.01)	Zn	38.9
Mo		Zr	
N			

Ag	(<0.01)	Na	
Al	(<0.001)	Nb	
As		Nd	
Au		Ni	0.009
B		O	
Be		P	0.006
Bi		Pb	0.02
C	(<0.01)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	(<0.01)
Fe	0.076	Sb	(<0.03)
Ga		Se	
Gd		Si	3.95
Ge		Sn	(0.006)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.002	Zn	14.02
Mo		Zr	
N			

Ag	(0.01)	Na	
Al	0.002	Nb	
As	(0.002)	Nd	
Au		Ni	0.011
B		O	(0.002)
Be		P	0.003
Bi		Pb	0.013
C	0.005	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	(0.003)	Ru	
Cu	84	S	(<0.001)
Fe	0.025	Sb	(0.001)
Ga		Se	
Gd		Si	3.11
Ge		Sn	0.009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.002	Zn	12.94
Mo		Zr	
N			

Brass

Name MBH-31X WSB6 F

Description Silicon Brass

Grade

UNS

Ag	0.0131	Na	
Al	(0.001)	Nb	
As	0.011	Nd	
Au		Ni	0.0509
B	0.0054	O	
Be		P	0.0179
Bi		Pb	0.031
C		Pd	
Ca		Pr	
Cd	0.0039	Pt	
Ce		Re	
Co	0.0095	Rh	
Cr		Ru	
Cu	95.4	S	
Fe	0.158	Sb	0.0406
Ga		Se	
Gd		Si	3.13
Ge		Sn	0.0142
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.924	Zn	0.0506
Mo		Zr	
N			

Name MBH-31X TB1 K

Description Trace Elements in Brass

Grade

UNS

Ag	0.0455	Na	
Al	0.493	Nb	
As	0.111	Nd	
Au		Ni	0.0619
B	0.001	O	
Be		P	
Bi	0.0414	Pb	0.207
C		Pd	
Ca		Pr	
Cd	0.0118	Pt	
Ce		Re	
Co	0.05	Rh	
Cr		Ru	
Cu	63.08	S	
Fe	0.171	Sb	0.105
Ga		Se	
Gd		Si	0.08
Ge		Sn	0.134
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.28	Zn	35.17
Mo		Zr	
N			

Name MBH-31X TB2 J

Description Trace Elements in Brass

Grade

UNS

Ag	0.0142	Na	
Al	0.0282	Nb	
As	0.0166	Nd	
Au		Ni	0.0758
B		O	
Be		P	
Bi	0.0176	Pb	0.065
C		Pd	
Ca		Pr	
Cd	0.0015	Pt	
Ce		Re	
Co	0.0151	Rh	
Cr	0.0054	Ru	
Cu	63.68	S	
Fe	0.059	Sb	0.0498
Ga		Se	
Gd		Si	0.049
Ge		Sn	0.127
H		Sr	
Hf		Ta	
Hg		Te	0.0206
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.142	Zn	35.71
Mo		Zr	
N			

Name MBH-31X TB3 L

Description Trace Elements in Brass

Grade

UNS

Ag	0.013	Na	
Al	0.04	Nb	
As	0.048	Nd	
Au		Ni	0.03
B	0.0015	O	
Be		P	
Bi	0.008	Pb	0.12
C		Pd	
Ca		Pr	
Cd	0.01	Pt	
Ce		Re	
Co	0.004	Rh	
Cr		Ru	
Cu	[bal]	S	
Fe	0.02	Sb	0.03
Ga		Se	
Gd		Si	0.02
Ge		Sn	0.14
H		Sr	
Hf		Ta	
Hg		Te	0.003
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.035	Zn	37
Mo		Zr	
N			

Name MBH-31X TB4 G

Description Trace Elements in Brass

Grade

UNS

Ag		Na	
Al	0.0041	Nb	
As	0.0106	Nd	
Au		Ni	0.0133
B	(0.0004)	O	
Be		P	
Bi	0.0058	Pb	0.0246
C		Pd	
Ca		Pr	
Cd	0.0032	Pt	
Ce		Re	
Co	0.0067	Rh	
Cr		Ru	
Cu	66.07	S	
Fe	0.034	Sb	0.0095
Ga		Se	
Gd		Si	0.0203
Ge		Sn	0.0197
H		Sr	
Hf		Ta	
Hg		Te	0.0035
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0013	Zn	33.64
Mo		Zr	
N			

Brass

Name MBH-31X TB5 B

Description Trace Elements in Brass

Grade

UNS

Ag	0.216	Na	
Al	0.0711	Nb	
As	0.396	Nd	
Au		Ni	0.106
B		O	
Be		P	
Bi	0.292	Pb	0.575
C		Pd	
Ca		Pr	
Cd	0.49	Pt	
Ce		Re	
Co	0.0202	Rh	
Cr	0.0031	Ru	
Cu	61.49	S	
Fe	0.094	Sb	0.229
Ga		Se	
Gd		Si	0.111
Ge		Sn	0.129
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.283	Zn	35.62
Mo		Zr	
N			

Section 4

Bronze

Name IARM-79B
Description Aluminum Bronze
Grade CDA 623
UNS C62300

Name IARM-79C
Description Aluminum Bronze
Grade CDA 623
UNS C62300

Name IARM-80D
Description Aluminum Bronze
Grade CDA 630
UNS C63000

Name IARM-Cu642-18
Description Aluminum Bronze
Grade CDA 642
UNS C64200

Name IARM-204A ↓
Description Aluminum Bronze
Grade CDA 954M
UNS C95410

Ag	0.002	Na	
Al	9.19	Nb	
As		Nd	
Au		Ni	0.075
B		O	(0.002)
Be		P	0.005
Bi	(0.003)	Pb	(0.003)
C	0.002	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.002)	Rh	
Cr	(0.003)	Ru	
Cu	88.4	S	(0.001)
Fe	2.13	Sb	
Ga		Se	
Gd		Si	0.019
Ge		Sn	0.017
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.16	Zn	0.013
Mo		Zr	
N	(0.001)		

Ag	(<0.005)	Na	
Al	9.2	Nb	
As	0.003	Nd	
Au		Ni	0.55
B		O	(0.001)
Be		P	0.006
Bi		Pb	(<0.005)
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.005)	Rh	
Cr	(0.002)	Ru	
Cu	87.6	S	(<0.001)
Fe	2.28	Sb	(<0.005)
Ga		Se	
Gd		Si	0.033
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.2	Zn	0.014
Mo		Zr	
N	(<0.0001)		

Ag	0.04	Na	
Al	9.67	Nb	(<0.02)
As	0.009	Nd	
Au		Ni	5.01
B	(0.003)	O	(0.001)
Be	(<0.002)	P	0.005
Bi	0.004	Pb	0.005
C	(0.004)	Pd	
Ca		Pr	
Cd	(0.002)	Pt	
Ce		Re	
Co	0.022	Rh	
Cr	0.005	Ru	
Cu	(81.7)	S	0.003
Fe	2.99	Sb	(<0.02)
Ga		Se	(<0.03)
Gd		Si	0.025
Ge	(0.003)	Sn	0.093
H		Sr	
Hf		Ta	
Hg		Te	(0.04)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.003	Y	
Mn	0.346	Zn	0.007
Mo		Zr	(<0.002)
N	(0.002)		

Ag	(0.015)	Na	
Al	6.5	Nb	(<0.005)
As	(0.01)	Nd	
Au		Ni	0.014
B	(<0.005)	O	(0.001)
Be		P	0.009
Bi	(0.001)	Pb	0.019
C	(<0.005)	Pd	
Ca		Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	(<0.005)	Rh	
Cr	(<0.005)	Ru	
Cu	90	S	(0.002)
Fe	0.039	Sb	(<0.005)
Ga		Se	(0.002)
Gd		Si	1.96
Ge		Sn	0.019
H	(<0.001)	Sr	
Hf		Ta	(<0.001)
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	(<0.005)
Li		W	(<0.001)
Mg	(<0.005)	Y	
Mn	0.0024	Zn	1.19
Mo	(<0.005)	Zr	(<0.005)
N	(0.001)		

Ag	0.009	Na	
Al	10.55	Nb	
As	(<0.01)	Nd	
Au		Ni	1.95
B		O	
Be		P	0.007
Bi		Pb	0.004
C	0.006	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.008	Rh	
Cr	0.008	Ru	
Cu	83.3	S	(0.002)
Fe	3.87	Sb	(<0.01)
Ga		Se	
Gd		Si	0.034
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.052	Zn	0.22
Mo		Zr	
N			

Bronze

Name IARM-94B ↓
Description Aluminum Bronze
Grade CDA 955
UNS C95500

Name IARM-Cu955-18
Description Aluminum Bronze
Grade CDA 955
UNS C95500

Name IARM-334A
Description Aluminum Bronze
Grade CDA 955M
UNS C95510

Name IARM-334B
Description Aluminum Bronze
Grade CDA 955M
UNS C95511

Name MBH-32X 61400 A
Description Aluminum Bronze
Grade
UNS

Ag	0.017	Na	
Al	10.8	Nb	
As	(<0.01)	Nd	
Au		Ni	4.31
B		O	
Be		P	0.011
Bi		Pb	0.004
C	(0.006)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	0.017	Ru	
Cu	80.6	S	0.002
Fe	3.99	Sb	(0.011)
Ga		Se	
Gd		Si	0.028
Ge		Sn	(0.003)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.071	Zn	0.14
Mo		Zr	(<0.001)
N			

Ag	0.0019	Na	
Al	10.37	Nb	
As	0.002	Nd	
Au		Ni	4.5
B	(0.003)	O	(0.001)
Be		P	0.013
Bi	(0.0005)	Pb	0.006
C	0.008	Pd	(0.0001)
Ca	(0.002)	Pr	
Cd	(0.0003)	Pt	
Ce		Re	
Co	0.0027	Rh	
Cr	0.008	Ru	
Cu	80.8	S	(0.0012)
Fe	3.5	Sb	(0.002)
Ga		Se	(<0.001)
Gd		Si	0.022
Ge		Sn	0.0056
H	(0.0001)	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.001)
Ir		Tl	
La		V	(<0.005)
Li		W	
Mg	(0.0005)	Y	
Mn	0.77	Zn	0.038
Mo	(0.0005)	Zr	(<0.001)
N	(0.00001)		

Ag	(0.001)	Na	
Al	9.76	Nb	
As	(0.004)	Nd	
Au		Ni	4.77
B	(0.001)	O	(0.0003)
Be	(0.001)	P	(0.005)
Bi	(0.001)	Pb	0.01
C	0.0058	Pd	
Ca		Pr	
Cd	(0.001)	Pt	
Ce		Re	
Co	(0.003)	Rh	
Cr	(0.01)	Ru	
Cu	80.7	S	0.0007
Fe	3.82	Sb	0.004
Ga		Se	
Gd		Si	0.073
Ge		Sn	0.025
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.001)	Y	
Mn	0.69	Zn	0.11
Mo		Zr	
N	(0.0001)		

Ag	0.0013	Na	
Al	9.91	Nb	(0.001)
As	(0.003)	Nd	
Au		Ni	4.7
B	(0.002)	O	(0.0006)
Be	(0.001)	P	0.005
Bi	(0.001)	Pb	0.006
C	0.005	Pd	
Ca		Pr	
Cd	(0.001)	Pt	
Ce		Re	
Co	(0.003)	Rh	
Cr	(0.004)	Ru	
Cu	80.8	S	0.0008
Fe	3.7	Sb	(0.004)
Ga		Se	(0.004)
Gd		Si	0.075
Ge		Sn	0.019
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.001)	Y	
Mn	0.6	Zn	0.122
Mo		Zr	
N	(0.0004)		

Ag	0.001	Na	
Al	6.81	Nb	
As		Nd	
Au		Ni	0.0242
B		O	
Be		P	0.0008
Bi		Pb	(0.001)
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	89.99	S	
Fe	2.74	Sb	
Ga		Se	
Gd		Si	0.0124
Ge		Sn	0.301
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.005	Y	
Mn	0.082	Zn	0.06
Mo		Zr	
N			

Bronze

Name MBH-32X ALB10 B

Description Aluminum Bronze

Grade

UNS

Ag	0.0144	Na	
Al	12.11	Nb	
As	0.0194	Nd	
Au		Ni	7.21
B		O	
Be		P	0.069
Bi		Pb	0.152
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0984	Rh	
Cr	0.0152	Ru	
Cu	73.64	S	
Fe	3.63	Sb	
Ga		Se	
Gd		Si	0.158
Ge		Sn	0.201
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0122	Y	
Mn	1.626	Zn	0.961
Mo		Zr	
N			

Name MBH-32X ALB12 A

Description Aluminum Bronze

Grade

UNS

Ag	0.044	Na	
Al	8.29	Nb	
As		Nd	
Au		Ni	6.33
B		O	
Be		P	0.0101
Bi		Pb	0.0018
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0056	Rh	
Cr		Ru	
Cu	82.9	S	
Fe	1.094	Sb	
Ga		Se	
Gd		Si	0.0202
Ge		Sn	0.31
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0013	Y	
Mn	0.958	Zn	0.0625
Mo		Zr	
N			

Name MBH-32X ALB13 A

Description Aluminum Bronze

Grade

UNS

Ag		Na	
Al	7.09	Nb	
As		Nd	
Au		Ni	1.381
B		O	
Be		P	0.009
Bi		Pb	(0.001)
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0011	Rh	
Cr		Ru	
Cu	84.96	S	
Fe	1.171	Sb	
Ga		Se	
Gd		Si	0.086
Ge		Sn	0.0072
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	5.39	Zn	0.0194
Mo		Zr	
N			

Name MBH-32X ALB3 S

Description Aluminum Bronze

Grade

UNS

Ag	0.0272	Na	
Al	10.43	Nb	0.018
As	0.0213	Nd	
Au		Ni	3.51
B		O	
Be		P	0.0345
Bi		Pb	0.118
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.076	Rh	
Cr	0.0392	Ru	
Cu	80.01	S	
Fe	3.718	Sb	
Ga		Se	
Gd		Si	0.155
Ge		Sn	0.1209
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0659	Y	
Mn	0.243	Zn	1.314
Mo		Zr	
N			

Name MBH-32X ALB5 K

Description Aluminum Bronze

Grade

UNS

Ag	0.0061	Na	
Al	7.21	Nb	0.181
As		Nd	
Au		Ni	3.92
B		O	
Be		P	(0.05)
Bi		Pb	0.0512
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0606	Rh	
Cr	0.192	Ru	
Cu	83.71	S	
Fe	2.04	Sb	
Ga		Se	
Gd		Si	0.107
Ge		Sn	0.0293
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.179	Y	
Mn	1.417	Zn	0.8
Mo		Zr	
N			

Bronze

Name MBH-32X ALB6 K ↓

Description Aluminum Bronze

Grade

UNS

Ag	0.0082	Na	
Al	9.69	Nb	
As	0.0116	Nd	
Au		Ni	5.42
B		O	
Be		P	(0.006)
Bi		Pb	0.0749
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.139	Rh	
Cr		Ru	
Cu	80.77	S	
Fe	2.71	Sb	
Ga		Se	
Gd		Si	0.073
Ge		Sn	0.12
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0104	Y	
Mn	0.787	Zn	0.126
Mo		Zr	
N			

Name MBH-32X ALB8 F

Description Aluminum Bronze

Grade

UNS

Ag	0.01	Na	
Al	6.21	Nb	(0.002)
As	0.189	Nd	
Au		Ni	6.11
B		O	
Be		P	0.261
Bi		Pb	0.049
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.425	Rh	
Cr	0.088	Ru	
Cu	77.04	S	
Fe	5.37	Sb	0.025
Ga		Se	
Gd		Si	0.513
Ge		Sn	0.435
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.194	Y	
Mn	1.57	Zn	1.395
Mo		Zr	(<0.001)
N			

Name MBH-32X ALB9 C

Description Aluminum Bronze

Grade

UNS

Ag	0.0417	Na	
Al	13.52	Nb	
As	0.0163	Nd	
Au		Ni	0.628
B		O	
Be		P	0.096
Bi		Pb	0.267
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0027	Rh	
Cr	0.0206	Ru	
Cu	81.64	S	
Fe	3.12	Sb	
Ga		Se	
Gd		Si	0.235
Ge		Sn	0.0601
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.09	Y	
Mn	0.159	Zn	0.142
Mo		Zr	
N			

Name MBH-32X CA23 A

Description Aluminum Bronze

Grade

UNS

Ag	0.0008	Na	
Al	9.19	Nb	
As		Nd	
Au		Ni	4.71
B		O	
Be		P	0.0011
Bi		Pb	(0.0026)
C	(0.005)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0018	Ru	
Cu	81.05	S	
Fe	3.63	Sb	
Ga		Se	
Gd		Si	0.026
Ge		Sn	0.0164
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0003	Y	
Mn	1.298	Zn	0.031
Mo		Zr	
N			

Name MBH-32X CA31 A

Description Aluminum Bronze

Grade

UNS

Ag	0.0008	Na	
Al	8.95	Nb	
As		Nd	
Au		Ni	4.28
B		O	
Be		P	(0.003)
Bi		Pb	(0.0024)
C	0.006	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0026	Ru	
Cu	82.24	S	
Fe	4.06	Sb	
Ga		Se	
Gd		Si	0.036
Ge		Sn	0.0037
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0008	Y	
Mn	0.336	Zn	0.041
Mo		Zr	
N			

Bronze

Name MBH-32X CA7 A ↓
Description Aluminum Bronze
Grade
UNS

Ag	0.0009	Na	
Al	9.37	Nb	
As		Nd	
Au		Ni	0.234
B		O	
Be		P	
Bi		Pb	(0.004)
C	0.0028	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0028	Ru	
Cu	88.06	S	
Fe	2.09	Sb	
Ga		Se	
Gd		Si	0.017
Ge		Sn	0.0172
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0004	Y	
Mn	0.151	Zn	0.006
Mo		Zr	
N			

Name IARM-Cu932-18
Description Bearing Bronze
Grade CDA 932
UNS C93200

Ag	0.019	Na	
Al	0.0007	Nb	(<0.001)
As	0.0073	Nd	
Au		Ni	0.454
B	(<0.005)	O	0.002
Be	(<0.005)	P	0.04
Bi	0.094	Pb	7.95
C	0.0025	Pd	
Ca	(<0.005)	Pr	
Cd	0.0007	Pt	
Ce		Re	
Co	0.0024	Rh	
Cr	(<0.004)	Ru	
Cu	81.2	S	0.031
Fe	0.07	Sb	0.31
Ga		Se	0.009
Gd		Si	(<0.005)
Ge	(<0.0001)	Sn	6.82
H	(<0.001)	Sr	
Hf	(<0.001)	Ta	(<0.001)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	(<0.005)
Ir		Tl	
La		V	
Li		W	(<0.001)
Mg	(<0.001)	Y	
Mn	(<0.001)	Zn	3.44
Mo	(<0.005)	Zr	(<0.001)
N	(<0.001)		

Name MBH-32X SEB2 D
Description Bismuth Bronze
Grade Sebiloy Type Alloy
UNS C89510*

Ag	0.0443	Na	
Al		Nb	
As	0.016	Nd	
Au		Ni	0.0449
B		O	
Be		P	0.036
Bi	4.57	Pb	0.104
C		Pd	
Ca		Pr	
Cd	0.0255	Pt	
Ce		Re	
Co	0.0133	Rh	
Cr		Ru	
Cu	86.56	S	0.03
Fe	0.074	Sb	0.0222
Ga		Se	0.044
Gd		Si	
Ge		Sn	6.96
H		Sr	
Hf		Ta	
Hg		Te	
In	0.074	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	1.4
Mo		Zr	
N			

Name MBH-32X SEB3 E ↓
Description Bismuth Bronze
Grade Sebiloy Type Alloy
UNS C89510*

Ag		Na	
Al		Nb	
As	0.0325	Nd	
Au		Ni	1.214
B		O	
Be		P	0.0139
Bi	6.47	Pb	0.296
C		Pd	
Ca		Pr	
Cd	0.0095	Pt	
Ce		Re	
Co	0.0491	Rh	
Cr		Ru	
Cu	86.47	S	0.018
Fe	0.0113	Sb	0.108
Ga		Se	1.3
Gd		Si	
Ge		Sn	2.96
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.887
Mo		Zr	
N			

Name MBH-32X SEB4 F ↓
Description Bismuth Bronze
Grade Sebiloy Type Alloy
UNS C89510*

Ag		Na	
Al	0.0007	Nb	
As	0.0065	Nd	
Au		Ni	0.0199
B		O	
Be		P	0.0043
Bi	2.5	Pb	0.0357
C		Pd	
Ca		Pr	
Cd	0.0017	Pt	
Ce		Re	
Co	0.32	Rh	
Cr		Ru	
Cu	79.82	S	
Fe	0.093	Sb	0.0343
Ga		Se	0.119
Gd		Si	
Ge		Sn	10.05
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	7.02
Mo		Zr	
N			

Bronze

Name MBH-32X SEB5 C
Description Bismuth Bronze
Grade Sebiloy Type Alloy
UNS C89510*

Name MBH-32X SEB7 B
Description Bismuth Bronze
Grade Sebiloy Type Alloy
UNS C89510*

Name MBH-32X 52480 A
Description Bronze
Grade
UNS

Name MBH-32X SN1 F ↓
Description Bronze
Grade
UNS

Name MBH-32X SN2 J
Description Bronze
Grade
UNS

Ag		Na	
Al	(0.001)	Nb	
As		Nd	
Au		Ni	0.317
B		O	
Be		P	0.072
Bi	1.056	Pb	0.268
C		Pd	
Ca		Pr	
Cd	0.0051	Pt	
Ce		Re	
Co	0.0156	Rh	
Cr		Ru	
Cu	87.21	S	0.05
Fe	0.043	Sb	0.0334
Ga		Se	0.471
Gd		Si	
Ge		Sn	5.18
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	5.3
Mo		Zr	
N			

Ag	0.033	Na	
Al		Nb	
As	0.035	Nd	
Au		Ni	1.15
B		O	
Be		P	0.005
Bi	3.2	Pb	0.28
C		Pd	
Ca		Pr	
Cd	0.008	Pt	
Ce		Re	
Co	0.13	Rh	
Cr		Ru	
Cu	[bal]	S	0.05
Fe	0.09	Sb	0.16
Ga		Se	1.35
Gd		Si	
Ge		Sn	3.1
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	4.7
Mo		Zr	
N			

Ag	0.0131	Na	
Al		Nb	
As		Nd	
Au		Ni	0.369
B		O	
Be		P	0.0103
Bi	0.0013	Pb	0.329
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	88.54	S	0.0071
Fe	0.02	Sb	0.0182
Ga		Se	
Gd		Si	(0.002)
Ge		Sn	10.33
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.397
Mo		Zr	
N			

Ag		Na	
Al	(0.001)	Nb	
As	0.0111	Nd	
Au		Ni	1.931
B		O	
Be		P	0.0022
Bi		Pb	5.66
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0136	Rh	
Cr		Ru	
Cu	80.34	S	0.0126
Fe	0.0014	Sb	0.0274
Ga		Se	
Gd		Si	(0.001)
Ge		Sn	11.65
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	<0.001	Zn	0.259
Mo		Zr	
N			

Ag	0.0107	Na	
Al	(0.002)	Nb	
As	0.0119	Nd	
Au		Ni	1.025
B		O	
Be		P	0.22
Bi	0.119	Pb	2.06
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0343	Rh	
Cr		Ru	
Cu	81.17	S	0.0106
Fe	0.041	Sb	0.106
Ga		Se	
Gd		Si	0.009
Ge		Sn	14.22
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0246	Zn	0.94
Mo		Zr	
N			

Bronze

Name MBH-32X SN3 C

Description Bronze

Grade

UNS

Ag		Na	
Al	(0.14)	Nb	
As	0.0323	Nd	
Au		Ni	0.464
B		O	
Be		P	0.646
Bi		Pb	0.159
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.046	Rh	
Cr		Ru	
Cu	81.7	S	0.035
Fe	0.14	Sb	0.362
Ga		Se	
Gd		Si	0.0247
Ge		Sn	16.14
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.067	Zn	0.15
Mo		Zr	
N			

Name MBH-32X SN4 B ↓

Description Bronze

Grade

UNS

Ag	0.495	Na	
Al	0.0513	Nb	
As	0.0651	Nd	
Au		Ni	0.607
B		O	
Be		P	1.208
Bi	0.015	Pb	0.864
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.1	Rh	
Cr		Ru	
Cu	76.87	S	0.0132
Fe	0.0811	Sb	0.143
Ga		Se	
Gd		Si	0.0223
Ge		Sn	18.96
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0148	Zn	0.496
Mo		Zr	
N			

Name MBH-32X SN6 B

Description Bronze

Grade

UNS

Ag	1.007	Na	
Al	0.059	Nb	
As	0.804	Nd	
Au	0.0027	Ni	0.295
B		O	
Be		P	
Bi	0.127	Pb	1.644
C		Pd	
Ca		Pr	
Cd	0.0242	Pt	
Ce		Re	
Co	0.75	Rh	
Cr	0.015	Ru	
Cu	85.73	S	
Fe	0.376	Sb	0.304
Ga		Se	
Gd		Si	
Ge		Sn	6.78
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.09	Zn	2
Mo		Zr	
N			

Name MBH-32X SN7 B

Description Bronze

Grade

UNS

Ag	0.32	Na	
Al	0.025	Nb	
As	1.15	Nd	
Au		Ni	0.28
B		O	
Be		P	0.005
Bi	0.2	Pb	2.3
C		Pd	
Ca		Pr	
Cd	0.03	Pt	
Ce		Re	
Co	0.35	Rh	
Cr		Ru	
Cu	[bal]	S	0.02
Fe	0.035	Sb	0.24
Ga		Se	
Gd		Si	
Ge		Sn	12.5
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	1.2
Mo		Zr	
N			

Name IARM-72A ↓

Description Bronze - Lead

Grade

UNS

Ag	(<0.005)	Na	
Al	(<0.01)	Nb	
As		Nd	
Au		Ni	(<0.01)
B		O	
Be	(<0.001)	P	(0.007)
Bi		Pb	1.78
C	(0.014)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.01)	Rh	
Cr		Ru	
Cu	(89.71)	S	0.0014
Fe	0.011	Sb	(<0.01)
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	(<0.01)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.01)	Zn	8.48
Mo		Zr	
N			

Bronze

Name IARM-72B
Description Bronze - Leaded
Grade CDA 314
UNS C31400

Name MBH-32X 93700 A
Description Bronze - Leaded
Grade
UNS

Name MBH-32X LB10 G
Description Bronze - Leaded
Grade
UNS

Name MBH-32X LB11 E
Description Bronze - Leaded
Grade
UNS

Name MBH-32X LB12 E
Description Bronze - Leaded
Grade
UNS

Ag	(0.002)	Na	
Al		Nb	
As	(0.003)	Nd	
Au		Ni	0.004
B		O	0.002
Be		P	0.005
Bi		Pb	1.99
C	0.002	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	90.08	S	0.0015
Fe	0.007	Sb	0.006
Ga		Se	
Gd		Si	(0.002)
Ge		Sn	0.029
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	7.81
Mo		Zr	
N	(0.0002)		

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.307
B		O	
Be		P	(0.0015)
Bi		Pb	8.38
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0004	Rh	
Cr		Ru	
Cu	80.43	S	0.0017
Fe	0.0011	Sb	0.0051
Ga		Se	
Gd		Si	
Ge		Sn	9.95
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.78
Mo		Zr	
N			

Ag	0.0686	Na	
Al	(0.001)	Nb	
As	0.169	Nd	
Au		Ni	0.69
B		O	
Be		P	0.0034
Bi	0.093	Pb	12.6
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.084	Rh	
Cr		Ru	
Cu	77.1	S	0.01
Fe	0.0011	Sb	0.599
Ga		Se	
Gd		Si	
Ge		Sn	8.29
H		Sr	
Hf		Ta	
Hg		Te	0.0107
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.11
Mo		Zr	
N			

Ag	0.0617	Na	
Al	(0.001)	Nb	
As	0.0408	Nd	
Au		Ni	0.498
B		O	
Be		P	0.005
Bi	0.0519	Pb	10.21
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0098	Rh	
Cr		Ru	
Cu	78.72	S	0.0295
Fe	0.0034	Sb	0.068
Ga		Se	
Gd		Si	0.0093
Ge		Sn	10.19
H		Sr	
Hf		Ta	
Hg		Te	0.0147
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.039
Mo		Zr	
N			

Ag	0.045	Na	
Al	0.0337	Nb	
As	0.112	Nd	
Au		Ni	0.354
B		O	
Be		P	0.24
Bi	0.0338	Pb	8.64
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.061	Rh	
Cr		Ru	
Cu	79.76	S	0.053
Fe	0.029	Sb	0.484
Ga		Se	
Gd		Si	0.0099
Ge		Sn	9.63
H		Sr	
Hf		Ta	
Hg		Te	0.0215
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.459
Mo		Zr	
N			

Bronze

Name MBH-32X LB14 H
Description Bronze - Lead
Grade
UNS

Ag	0.046	Na	
Al	0.0008	Nb	
As	0.055	Nd	
Au		Ni	0.3
B		O	
Be		P	0.039
Bi	0.496	Pb	15.04
C		Pd	
Ca		Pr	
Cd	0.0005	Pt	
Ce		Re	
Co	0.0018	Rh	
Cr		Ru	
Cu	78.4	S	0.036
Fe	0.041	Sb	0.103
Ga		Se	
Gd		Si	0.0012
Ge		Sn	5.16
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.254
Mo		Zr	
N			

Name IARM-150A ↓
Description Copper-Silicon Bronze
Grade CDA 872
UNS C87200

Ag	(<0.01)	Na	
Al	(<0.01)	Nb	
As		Nd	
Au		Ni	0.013
B		O	
Be		P	0.005
Bi		Pb	0.011
C	(<0.01)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	(0.001)
Fe	0.045	Sb	(<0.03)
Ga		Se	
Gd		Si	3.93
Ge		Sn	0.016
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.05	Zn	0.03
Mo		Zr	
N			

Name MBH-33X 54400 A
Description Gun Metal
Grade
UNS

Ag	0.0124	Na	
Al	0.0009	Nb	
As	0.0156	Nd	
Au		Ni	0.244
B		O	
Be		P	0.243
Bi		Pb	4.69
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0013	Rh	
Cr		Ru	
Cu	86.79	S	0.0251
Fe	0.072	Sb	0.0362
Ga		Se	
Gd		Si	
Ge		Sn	3.97
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	3.87
Mo		Zr	
N			

Name MBH-33X GM20 B
Description Gun Metal
Grade
UNS

Ag	0.21	Na	
Al	0.14	Nb	
As	0.28	Nd	
Au		Ni	0.21
B		O	
Be		P	0.06
Bi	0.035	Pb	0.3
C		Pd	
Ca		Pr	
Cd	0.02	Pt	
Ce		Re	
Co	0.04	Rh	
Cr		Ru	
Cu	[bal]	S	
Fe	0.43	Sb	2.35
Ga		Se	
Gd		Si	
Ge		Sn	4.5
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.04	Zn	1.78
Mo		Zr	
N			

Name MBH-33X GM24 A
Description Gun Metal
Grade
UNS

Ag	0.0046	Na	
Al		Nb	
As	0.001	Nd	
Au		Ni	0.0087
B		O	
Be		P	0.19
Bi	0.0009	Pb	3.35
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	(0.0013)	Ru	
Cu	88.88	S	0.003
Fe	0.0083	Sb	0.0012
Ga		Se	
Gd		Si	0.0028
Ge		Sn	3.85
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	<0.0005	Zn	3.67
Mo		Zr	
N			

Bronze

Name MBH-33X GM29 A

Description Gun Metal

Grade

UNS

Ag	0.0026	Na	
Al		Nb	
As	0.0017	Nd	
Au		Ni	0.0289
B		O	
Be		P	0.138
Bi	0.0019	Pb	0.05
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	(0.0004)	Ru	
Cu	89.36	S	0.0024
Fe	0.0102	Sb	0.0015
Ga		Se	
Gd		Si	0.0027
Ge		Sn	6.12
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.0005)	Zn	4.23
Mo		Zr	
N			

Name MBH-33X GM4 AD

Description Gun Metal

Grade

UNS

Ag	0.0206	Na	
Al	0.0015	Nb	
As	0.0228	Nd	
Au		Ni	1.482
B		O	
Be		P	0.0034
Bi	0.0442	Pb	5.27
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0077	Rh	
Cr		Ru	
Cu	84.02	S	0.034
Fe	0.0932	Sb	0.0568
Ga		Se	
Gd		Si	0.001
Ge		Sn	3.02
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0006	Zn	5.9
Mo		Zr	
N			

Name MBH-33X GM5 P

Description Gun Metal

Grade

UNS

Ag	0.0497	Na	
Al	0.055	Nb	
As	0.0498	Nd	
Au		Ni	0.728
B		O	
Be		P	0.0507
Bi	0.018	Pb	5.18
C		Pd	
Ca		Pr	
Cd	0.0048	Pt	
Ce		Re	
Co	0.0298	Rh	
Cr		Ru	
Cu	83.39	S	0.0411
Fe	0.127	Sb	0.072
Ga		Se	
Gd		Si	0.031
Ge		Sn	4.48
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	5.66
Mo		Zr	
N			

Name MBH-33X GM7 K

Description Gun Metal

Grade

UNS

Ag	0.0682	Na	
Al		Nb	
As	0.095	Nd	
Au		Ni	0.531
B		O	
Be		P	0.005
Bi	0.098	Pb	1.79
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.1	Rh	
Cr		Ru	
Cu	85.69	S	0.0613
Fe	0.0178	Sb	0.111
Ga		Se	
Gd		Si	
Ge		Sn	10.07
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	1.363
Mo		Zr	
N			

Name MBH-33X GM8 H

Description Gun Metal

Grade

UNS

Ag	0.1	Na	
Al	0.005	Nb	
As	0.01	Nd	
Au		Ni	0.49
B		O	
Be		P	0.035
Bi	0.015	Pb	5.8
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.015	Rh	
Cr	0.015	Ru	
Cu	[Bal]	S	0.02
Fe	0.14	Sb	0.06
Ga		Se	
Gd		Si	
Ge		Sn	3.9
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	6
Mo		Zr	
N			

Bronze

Name MBH-33X GM9 A

Description Gun Metal

Grade

UNS

Ag	0.0321	Na	
Al	0.0052	Nb	
As	0.0251	Nd	
Au		Ni	0.71
B		O	
Be		P	0.0547
Bi	0.076	Pb	6.91
C		Pd	
Ca		Pr	
Cd	0.0072	Pt	
Ce		Re	
Co	0.079	Rh	
Cr		Ru	
Cu	75.1	S	0.0153
Fe	0.09	Sb	0.184
Ga		Se	
Gd		Si	(0.003)
Ge		Sn	2.93
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	13.81
Mo		Zr	
N			

Name MBH-33X RB2 B

Description Gun Metal

Grade

UNS

Ag	0.105	Na	
Al	0.0078	Nb	
As	0.0395	Nd	
Au		Ni	0.33
B		O	
Be		P	0.0435
Bi	0.091	Pb	2.99
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0326	Rh	
Cr		Ru	
Cu	82.02	S	0.069
Fe	0.503	Sb	0.0494
Ga		Se	
Gd		Si	(0.002)
Ge		Sn	4.65
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0076	Zn	9.01
Mo		Zr	
N			

Name IARM-88A ↓

Description Manganese Bronze

Grade CDA 863

UNS C86300

Ag		Na	
Al	6.03	Nb	
As	(<0.01)	Nd	
Au		Ni	0.02
B		O	
Be		P	(0.004)
Bi		Pb	0.03
C	(0.022)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.01)	Rh	
Cr		Ru	
Cu		S	(0.002)
Fe	2.27	Sb	(0.01)
Ga		Se	
Gd		Si	0.02
Ge		Sn	0.04
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	3.72	Zn	23.25
Mo		Zr	
N			

Name IARM-88C

Description Manganese Bronze

Grade CDA 863

UNS C86300

Ag	0.004	Na	
Al	5.79	Nb	(0.0001)
As	0.007	Nd	
Au		Ni	0.276
B	(<0.1)	O	(0.0006)
Be	(<0.005)	P	0.02
Bi	0.004	Pb	0.133
C	0.005	Pd	
Ca		Pr	
Cd	0.0009	Pt	
Ce		Re	
Co	0.001	Rh	
Cr	0.008	Ru	
Cu	64.5	S	0.001
Fe	2.98	Sb	(0.003)
Ga		Se	(<0.005)
Gd		Si	0.091
Ge		Sn	0.147
H		Sr	
Hf		Ta	
Hg		Te	(0.0001)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0006	Y	
Mn	2.99	Zn	22.86
Mo		Zr	0.0004
N	(0.00016)		

Name IARM-83A ↓

Description Manganese Bronze A

Grade CDA 675

UNS C67500

Ag	(<0.005)	Na	
Al	(<0.01)	Nb	
As	(<0.01)	Nd	
Au		Ni	0.01
B		O	
Be		P	0.005
Bi		Pb	0.058
C	(0.007)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.01)	Rh	
Cr		Ru	
Cu		S	0.002
Fe	0.99	Sb	0.008
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	0.57
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.22	Zn	39.81
Mo		Zr	
N			

Bronze

Name IARM-83B
Description Manganese Bronze A
Grade CDA 675
UNS C67500

Name IARM-267A
Description Nickel-Tin Bronze
Grade CDA 947
UNS C94700

Name IARM-77A ↓
Description Phosphor Bronze - 5%
Grade CDA 510
UNS C51000

Name IARM-77B
Description Phosphor Bronze - 5%
Grade CDA 510
UNS C51000

Name IARM-78B ↓
Description Phosphor Bronze - B-2
Grade CDA 544
UNS C54400

Ag	(0.002)	Na	
Al	0.002	Nb	
As		Nd	
Au		Ni	0.01
B		O	(0.001)
Be		P	0.004
Bi		Pb	0.017
C	0.003	Pd	
Ca		Pr	
Cd	(0.003)	Pt	
Ce		Re	
Co	(0.003)	Rh	
Cr	(0.003)	Ru	
Cu	58.7	S	(0.001)
Fe	0.97	Sb	(0.004)
Ga		Se	
Gd		Si	(0.003)
Ge		Sn	0.85
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.001)	Y	
Mn	0.13	Zn	39.3
Mo		Zr	
N			

Ag	0.002	Na	
Al	0.003	Nb	
As	(0.004)	Nd	
Au		Ni	5.1
B		O	
Be		P	0.037
Bi	(0.005)	Pb	0.026
C	(0.003)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.002	Rh	
Cr	(0.001)	Ru	
Cu	87.8	S	0.0014
Fe	0.019	Sb	(<0.03)
Ga		Se	0.002
Gd		Si	0.003
Ge		Sn	4.95
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.002	Zn	2.06
Mo		Zr	
N			

Ag	(0.01)	Na	
Al	(<0.01)	Nb	
As	(<0.01)	Nd	
Au		Ni	(<0.01)
B		O	
Be		P	0.12
Bi		Pb	(0.011)
C	(0.012)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.01)	Rh	
Cr		Ru	
Cu		S	0.003
Fe	0.01	Sb	(0.01)
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	4.6
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.01	Zn	
Mo		Zr	
N			

Ag	(0.002)	Na	
Al	(0.001)	Nb	
As	(0.001)	Nd	
Au		Ni	0.002
B		O	(0.002)
Be		P	0.148
Bi	(0.004)	Pb	0.016
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	95.2	S	0.002
Fe	0.002	Sb	0.005
Ga		Se	
Gd		Si	(0.003)
Ge		Sn	4.66
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.002)	Zn	0.007
Mo		Zr	(0.001)
N	(0.0001)		

Ag	0.008	Na	
Al	(0.002)	Nb	
As	(<0.003)	Nd	
Au		Ni	0.077
B		O	
Be		P	0.19
Bi	(0.001)	Pb	3.87
C	(<0.002)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.0005)	Rh	
Cr		Ru	
Cu	87.7	S	0.01
Fe	0.02	Sb	0.01
Ga		Se	
Gd		Si	(<0.002)
Ge		Sn	4.73
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.002)	Zn	3.55
Mo		Zr	
N			

Bronze

Name IARM-Cu544-18
Description Phosphor Bronze B-2
Grade CDA 544
UNS C54400

Name MBH-32X 51000 A
Description Phosphor-Bronze
Grade
UNS

Name MBH-32X 52100 A
Description Phosphor-Bronze
Grade
UNS

Name MBH-32X PB10 P ↓
Description Phosphor-Bronze
Grade
UNS

Name MBH-32X PB11 H
Description Phosphor-Bronze
Grade
UNS

Ag	(0.0015)	Na	
Al	(0.0018)	Nb	(<0.005)
As	(0.0011)	Nd	
Au		Ni	0.019
B	(<0.005)	O	(0.0014)
Be	(<0.005)	P	0.069
Bi	(0.0014)	Pb	3.92
C	(0.0015)	Pd	
Ca		Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	(0.0008)	Rh	
Cr	(0.0056)	Ru	
Cu	88	S	(<0.011)
Fe	0.01	Sb	(0.0009)
Ga		Se	(0.0024)
Gd		Si	(0.0012)
Ge		Sn	4.14
H	(<0.001)	Sr	
Hf		Ta	(<0.001)
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	(<0.005)
Li		W	
Mg	(<0.005)	Y	
Mn	(0.0045)	Zn	3.8
Mo	(0.005)	Zr	(<0.005)
N	(<0.001)		

Ag	0.0024	Na	
Al	(0.001)	Nb	
As		Nd	
Au		Ni	0.0083
B		O	
Be		P	0.3
Bi		Pb	0.0031
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	94.84	S	0.0021
Fe	0.0025	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	4.86
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0112
Mo		Zr	
N			

Ag	0.0011	Na	
Al	0.0008	Nb	
As	0.0009	Nd	
Au		Ni	0.011
B		O	
Be		P	0.147
Bi	19	Pb	0.0031
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	92.08	S	0.0007
Fe	(0.001)	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	7.72
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0028
Mo		Zr	
N			

Ag		Na	
Al	(0.002)	Nb	
As	0.0126	Nd	
Au		Ni	0.013
B		O	
Be		P	0.003
Bi	0.034	Pb	0.0182
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0062	Rh	
Cr		Ru	
Cu	87.14	S	0.0144
Fe	0.0043	Sb	0.0134
Ga		Se	
Gd		Si	(0.001)
Ge		Sn	12.37
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	<0.001	Zn	0.256
Mo		Zr	
N			

Ag		Na	
Al	0.0701	Nb	
As	0.187	Nd	
Au		Ni	0.701
B	0.0232	O	
Be		P	0.899
Bi	0.0232	Pb	1.074
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0344	Rh	
Cr		Ru	
Cu	91.38	S	0.011
Fe	0.377	Sb	0.446
Ga		Se	
Gd		Si	0.084
Ge		Sn	3.07
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.015	Y	
Mn	0.0404	Zn	1.53
Mo		Zr	
N			

Bronze

Name MBH-32X PB12 F
Description Phosphor-Bronze
Grade
UNS

Ag	0.0155	Na	
Al	(0.001)	Nb	
As	0.0512	Nd	
Au		Ni	0.205
B		O	
Be		P	0.076
Bi	0.0647	Pb	0.0436
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.015	Rh	
Cr		Ru	
Cu	94.16	S	0.0108
Fe	0.053	Sb	0.1822
Ga		Se	
Gd		Si	(0.002)
Ge		Sn	5.03
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0014	Zn	0.13
Mo		Zr	
N			

Name MBH-32X PB15 A
Description Phosphor-Bronze
Grade
UNS

Ag		Na	
Al	0.045	Nb	
As	0.123	Nd	
Au		Ni	0.212
B		O	
Be		P	0.0873
Bi		Pb	0.174
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0509	Rh	
Cr		Ru	
Cu	96.07	S	
Fe	0.116	Sb	0.026
Ga		Se	
Gd		Si	0.043
Ge		Sn	2.21
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0275	Y	
Mn	0.0125	Zn	0.76
Mo		Zr	
N			

Name MBH-32X Pb15 B ◆
Description Phosphor-Bronze
Grade
UNS

Ag	(<0.001)	Na	
Al	0.064	Nb	(0.004)
As	0.102	Nd	
Au		Ni	0.145
B		O	(<0.002)
Be		P	0.104
Bi	0.0002	Pb	0.046
C		Pd	
Ca		Pr	
Cd	(0.001)	Pt	
Ce		Re	
Co	0.037	Rh	
Cr	0.0004	Ru	
Cu	(96.6)	S	0.0016
Fe	0.044	Sb	0.02
Ga		Se	0.0008
Gd		Si	(0.005)
Ge		Sn	2.04
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.023	Y	
Mn	0.0006	Zn	0.75
Mo		Zr	(0.001)
N			

Name MBH-32X PB20 A ↓
Description Phosphor-Bronze
Grade
UNS

Ag		Na	
Al	<0.001	Nb	
As	0.0011	Nd	
Au		Ni	0.009
B		O	
Be		P	0.196
Bi		Pb	0.0045
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	95.22	S	0.003
Fe	0.0013	Sb	0.0012
Ga		Se	
Gd		Si	0.0046
Ge		Sn	4.55
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.007)	Zn	0.007
Mo		Zr	
N			

Name IARM-Cu647-18
Description Silicon Bronze
Grade CDA 647
UNS C64700

Ag	(<0.006)	Na	
Al	0.0027	Nb	(0.0012)
As	(<0.005)	Nd	
Au		Ni	2.69
B	(0.003)	O	(0.0008)
Be		P	(<0.020)
Bi	(<0.005)	Pb	(<0.007)
C	(0.0017)	Pd	
Ca		Pr	
Cd	(0.0003)	Pt	
Ce		Re	
Co	(<0.003)	Rh	
Cr	(<0.005)	Ru	
Cu	(96.5)	S	(0.0009)
Fe	0.0056	Sb	(<0.020)
Ga		Se	(<0.010)
Gd		Si	0.7
Ge		Sn	(<0.010)
H	(<0.001)	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	(<0.001)
Li		W	(<0.001)
Mg	0.009	Y	
Mn	0.099	Zn	0.005
Mo	(<0.005)	Zr	0.044
N	(0.0006)		

Bronze

Name	IARM-82B ↓
Description	Silicon Bronze A
Grade	CDA 655
UNS	C65500

Name	IARM-89A ↓
Description	Tin Bronze
Grade	CDA 903
UNS	C90300

Name	IARM-89C ↓
Description	Tin Bronze
Grade	CDA 903
UNS	C90300

Name	IARM-Cu903-18
Description	Tin Bronze
Grade	CDA 903
UNS	C90300

Name	IARM-310A
Description	Tin Bronze
Grade	CDA 907
UNS	C90700

Ag		Na	
Al	0.002	Nb	
As	(<0.002)	Nd	
Au		Ni	0.011
B		O	(0.001)
Be		P	0.004
Bi		Pb	0.011
C	(0.003)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.004	Ru	
Cu	95.3	S	0.003
Fe	0.08	Sb	(<0.01)
Ga		Se	
Gd		Si	3.22
Ge		Sn	0.017
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.04	Zn	0.38
Mo		Zr	
N	(<0.0005)		

Ag		Na	
Al	(<0.01)	Nb	
As		Nd	
Au		Ni	0.15
B		O	
Be		P	0.11
Bi		Pb	0.09
C	(0.009)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.01)	Rh	
Cr		Ru	
Cu		S	0.018
Fe	0.009	Sb	(<0.01)
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	8.14
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.01)	Zn	3.48
Mo		Zr	
N			

Ag	0.005	Na	
Al	(0.002)	Nb	(0.005)
As	0.004	Nd	
Au		Ni	0.008
B		O	0.006
Be	(0.0005)	P	0.004
Bi	(0.003)	Pb	0.17
C	0.002	Pd	
Ca		Pr	
Cd	(0.001)	Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	(0.002)	Ru	
Cu	87.5	S	0.0011
Fe	0.004	Sb	0.008
Ga		Se	(0.001)
Gd		Si	0.003
Ge		Sn	9.14
H		Sr	
Hf		Ta	
Hg		Te	(0.0004)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.0004)	Y	
Mn	(0.001)	Zn	3
Mo		Zr	(0.001)
N	(0.0004)		

Ag	0.0059	Na	
Al	(0.001)	Nb	
As	(0.001)	Nd	
Au		Ni	0.41
B	(0.0004)	O	0.0013
Be		P	0.06
Bi	(0.0009)	Pb	0.066
C	(0.002)	Pd	(0.0001)
Ca	(0.0007)	Pr	
Cd	(0.0004)	Pt	
Ce		Re	
Co	0.0019	Rh	
Cr	(0.001)	Ru	
Cu	86.5	S	(0.0017)
Fe	0.012	Sb	0.002
Ga		Se	(0.001)
Gd		Si	(0.004)
Ge		Sn	8.3
H	(0.0002)	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.0001)
Ir		Tl	
La		V	(0.01)
Li		W	(0.01)
Mg	(0.001)	Y	
Mn	(0.0004)	Zn	4.57
Mo	(0.00002)	Zr	(0.001)
N	(0.00003)		

Ag	0.002	Na	
Al	0.0009	Nb	
As	0.002	Nd	
Au		Ni	0.043
B		O	(0.001)
Be	(0.001)	P	0.094
Bi	(0.001)	Pb	0.064
C	(0.005)	Pd	
Ca		Pr	
Cd	(0.001)	Pt	
Ce		Re	
Co	0.0011	Rh	
Cr	(0.001)	Ru	
Cu	89.2	S	0.0021
Fe	0.006	Sb	(0.002)
Ga		Se	(0.001)
Gd		Si	(0.001)
Ge		Sn	10.56
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.001)	Y	
Mn	(0.001)	Zn	0.1
Mo		Zr	
N			

Bronze

Name IARM-90C
Description Tin Bronze - Leaded
Grade CDA 922
UNS C92200

Name IARM-91E ↓
Description Tin Bronze - Leaded
Grade CDA 932
UNS C93200

Name IARM-92C
Description Tin Bronze - Leaded
Grade CDA 937
UNS C93700

Name IARM-184A
Description Tin Bronze - Leaded
Grade CDA 941
UNS C94100

Ag	0.011	Na	
Al	(0.001)	Nb	(0.0005)
As	0.002	Nd	
Au		Ni	0.266
B		O	(0.001)
Be	(0.0003)	P	0.026
Bi	0.009	Pb	1.4
C	(0.002)	Pd	
Ca		Pr	
Cd	0.0003	Pt	
Ce		Re	
Co	0.0012	Rh	
Cr	0.001	Ru	
Cu	87.5	S	0.01
Fe	0.101	Sb	0.022
Ga		Se	0.0013
Gd		Si	0.0012
Ge		Sn	6.3
H		Sr	
Hf		Ta	
Hg		Te	(0.003)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.0002)	Y	
Mn	0.003	Zn	4.3
Mo		Zr	(0.0002)
N	(0.0003)		

Ag	0.015	Na	
Al	0.0015	Nb	(0.0005)
As	0.008	Nd	
Au		Ni	0.3
B	(0.0005)	O	(0.002)
Be	0.0005	P	0.026
Bi	0.109	Pb	7.59
C	0.003	Pd	
Ca		Pr	
Cd	0.0011	Pt	
Ce		Re	
Co	0.0024	Rh	
Cr	0.0008	Ru	
Cu	81.3	S	0.028
Fe	0.11	Sb	0.168
Ga		Se	0.004
Gd		Si	0.0021
Ge		Sn	6.69
H		Sr	
Hf		Ta	
Hg		Te	(<0.04)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(<0.0050)	Y	
Mn	0.0007	Zn	3.68
Mo		Zr	
N	(0.0004)		

Ag	0.05	Na	
Al	0.0013	Nb	
As	0.005	Nd	
Au		Ni	0.17
B		O	(0.004)
Be	(<0.001)	P	0.073
Bi	0.011	Pb	9.42
C	(0.002)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.0007)	Rh	
Cr	(0.0007)	Ru	
Cu	80.35	S	0.026
Fe	0.008	Sb	0.078
Ga		Se	(0.001)
Gd		Si	0.0019
Ge		Sn	9.65
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0016	Zn	0.15
Mo		Zr	
N			

Ag	(0.01)	Na	
Al	0.0016	Nb	
As	0.01	Nd	
Au		Ni	0.3
B		O	
Be		P	0.008
Bi	0.03	Pb	19
C	(0.004)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	(0.001)	Ru	
Cu	(74)	S	0.021
Fe	0.003	Sb	0.27
Ga		Se	(0.002)
Gd		Si	0.002
Ge		Sn	6
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.002	Zn	0.37
Mo		Zr	
N			

Section 5

Copper

Name MBH-39X 17866 AH
Description Residuals in Pure Copper
Grade
UNS

Ag	0.0086	Na	
Al	0.0028	Nb	
As	0.0435	Nd	
Au	(0.0004)	Ni	0.0511
B		O	
Be		P	0.0125
Bi	0.0109	Pb	0.0501
C		Pd	
Ca		Pr	
Cd	0.041	Pt	
Ce		Re	
Co	0.0273	Rh	
Cr	0.0316	Ru	
Cu		S	0.03226
Fe	0.0075	Sb	0.0095
Ga		Se	0.0053
Gd		Si	
Ge	0.0052	Sn	0.0614
H		Sr	
Hf		Ta	
Hg		Te	0.0065
In	0.0097	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0147	Zn	0.084
Mo		Zr	
N			

Name MBH-39X 17867 AE
Description Residuals in Pure Copper
Grade
UNS

Ag	0.0148	Na	
Al	0.0012	Nb	
As	0.0395	Nd	
Au	0.0011	Ni	0.0394
B	0.0042	O	
Be		P	0.0242
Bi	0.0123	Pb	0.0097
C		Pd	
Ca		Pr	
Cd	0.0061	Pt	
Ce		Re	
Co	0.0126	Rh	
Cr		Ru	
Cu		S	0.0249
Fe	0.0097	Sb	0.0132
Ga		Se	0.0061
Gd		Si	0.0081
Ge	0.0104	Sn	0.0437
H		Sr	
Hf		Ta	
Hg		Te	0.0072
In	0.0045	Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0053	Y	
Mn	0.0016	Zn	0.0381
Mo		Zr	
N			

Name MBH-39X 17868 AH
Description Residuals in Pure Copper
Grade
UNS

Ag	0.0209	Na	
Al	0.0098	Nb	
As	0.0145	Nd	
Au		Ni	0.0277
B		O	
Be		P	0.0107
Bi	0.0226	Pb	0.019
C		Pd	
Ca		Pr	
Cd	0.028	Pt	
Ce		Re	
Co	0.005	Rh	
Cr	0.0267	Ru	
Cu		S	0.0124
Fe	0.0227	Sb	0.0319
Ga		Se	0.0103
Gd		Si	
Ge	0.0272	Sn	0.0322
H		Sr	
Hf		Ta	
Hg		Te	0.0273
In	0.0197	Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.01)	Y	
Mn	0.0204	Zn	0.55
Mo		Zr	
N			

Name MBH-39X 17869 AG
Description Residuals in Pure Copper
Grade
UNS

Ag	0.0399	Na	
Al	0.0186	Nb	
As	0.0104	Nd	
Au	0.0022	Ni	0.0111
B		O	
Be		P	0.0245
Bi	0.0401	Pb	0.0714
C		Pd	
Ca		Pr	
Cd	0.0027	Pt	
Ce		Re	
Co	0.0084	Rh	
Cr	0.0199	Ru	
Cu		S	0.0069
Fe	0.0365	Sb	0.0375
Ga		Se	0.0197
Gd		Si	
Ge	0.0047	Sn	0.07
H		Sr	
Hf		Ta	
Hg		Te	0.0392
In	0.0026	Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0103	Y	
Mn	0.0325	Zn	0.0261
Mo		Zr	
N			

Name MBH-39X 17870 AH
Description Residuals in Pure Copper
Grade
UNS

Ag	0.0556	Na	
Al	0.144	Nb	
As	0.0023	Nd	
Au	0.0017	Ni	0.0555
B		O	
Be		P	0.0525
Bi	0.0494	Pb	0.0328
C		Pd	
Ca		Pr	
Cd	0.0022	Pt	
Ce		Re	
Co	0.0021	Rh	
Cr	0.0012	Ru	
Cu		S	0.0018
Fe	0.074	Sb	0.0415
Ga		Se	0.0118
Gd		Si	
Ge		Sn	0.0054
H		Sr	
Hf		Ta	
Hg		Te	0.05
In	0.0102	Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.033	Y	
Mn	0.0595	Zn	0.0285
Mo		Zr	
N			

Copper

Name MBH-39X 17871 D
Description Residuals in Pure Copper
Grade
UNS

Name MBH-39X 17872 A
Description Residuals in Pure Copper
Grade
UNS

Name MBH-39X 27866 A
Description Residuals in Pure Copper
Grade
UNS

Name MBH-39X 27869 A
Description Residuals in Pure Copper
Grade
UNS

Name MBH-165X ALB1 SUS
Description Copper Alloy
Grade Setting Up Sample
UNS

Ag	0.0309	Na	
Al		Nb	
As	0.015	Nd	
Au	0.0005	Ni	0.0412
B		O	
Be		P	0.0204
Bi	0.0527	Pb	0.0503
C		Pd	
Ca		Pr	
Cd	0.0027	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	0.0052
Fe	0.0019	Sb	0.0141
Ga		Se	0.031
Gd		Si	
Ge	(0.0009)	Sn	0.1058
H		Sr	
Hf		Ta	
Hg		Te	0.0137
In	0.0032	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0918
Mo		Zr	
N			

Ag	0.0214	Na	
Al	0.0118	Nb	
As	0.0203	Nd	
Au	(0.002)	Ni	0.0537
B		O	
Be		P	0.0045
Bi	0.024	Pb	0.293
C		Pd	
Ca		Pr	
Cd	0.0013	Pt	
Ce		Re	
Co	0.0102	Rh	
Cr		Ru	
Cu		S	0.0242
Fe	(0.045)	Sb	0.0217
Ga		Se	0.0103
Gd		Si	
Ge		Sn	0.18
H		Sr	
Hf		Ta	
Hg		Te	0.0208
In	0.0241	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0055	Zn	0.107
Mo		Zr	
N			

Ag	0.0057	Na	
Al		Nb	
As	0.0383	Nd	
Au	0.0016	Ni	0.0487
B		O	
Be		P	0.0147
Bi	0.0047	Pb	0.0054
C		Pd	
Ca		Pr	
Cd	0.0139	Pt	
Ce		Re	
Co	0.0308	Rh	
Cr	0.0012	Ru	
Cu		S	0.0469
Fe	0.003	Sb	0.0052
Ga		Se	0.0028
Gd		Si	
Ge	0.0029	Sn	0.0448
H		Sr	
Hf		Ta	
Hg		Te	0.0032
In	0.0437	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0287
Mo		Zr	
N			

Ag	0.00349	Na	
Al		Nb	
As	0.0098	Nd	
Au	0.008	Ni	0.019
B		O	
Be		P	0.0119
Bi	0.0376	Pb	0.0225
C		Pd	
Ca		Pr	
Cd	0.0028	Pt	
Ce		Re	
Co	0.0036	Rh	
Cr	(0.0002)	Ru	
Cu		S	0.0112
Fe	0.003	Sb	0.0362
Ga		Se	0.0127
Gd		Si	
Ge	0.0123	Sn	0.0106
H		Sr	
Hf		Ta	
Hg		Te	0.0153
In	0.009	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0065
Mo		Zr	
N			

Ag		Na	
Al	9	Nb	
As	0.005	Nd	
Au		Ni	5.3
B		O	
Be		P	0.015
Bi	0.015	Pb	0.2
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.01	Ru	
Cu	82	S	
Fe	2.8	Sb	
Ga		Se	
Gd		Si	0.1
Ge		Sn	0.03
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.04	Y	
Mn	0.08	Zn	0.06
Mo		Zr	
N			

Copper

Name MBH-165X MNB5 SUS
Description Copper Alloy
Grade Setting Up Sample
UNS

Name MBH-165X PB10 SUS
Description Copper Alloy
Grade Setting Up Sample
UNS

Name IARM-313A ↓
Description Copper Zinc Alloy
Grade CDA 693
UNS C69300

Name IARM-Cu172-18
Description Copper-Beryllium Alloy
Grade CDA 172
UNS C17200

Name ARMI-CU172-19 ♦
Description Beryllium Copper
Grade CDA 172
UNS C17200

Ag		Na	
Al	3.2	Nb	
As		Nd	
Au		Ni	1.1
B		O	
Be		P	
Bi		Pb	0.2
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	55	S	
Fe	0.55	Sb	
Ga		Se	
Gd		Si	0.4
Ge		Sn	1.6
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.2	Zn	38
Mo		Zr	
N			

Ag		Na	
Al	0.001	Nb	
As	0.02	Nd	
Au		Ni	0.06
B		O	
Be		P	0.002
Bi	0.02	Pb	0.04
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.001	Ru	
Cu	89	S	0.03
Fe	0.002	Sb	0.15
Ga		Se	0.01
Gd		Si	0.001
Ge		Sn	11
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.001)	Zn	0.05
Mo		Zr	
N			

Ag	0.0017	Na	
Al	(0.001)	Nb	(0.001)
As	0.001	Nd	
Au		Ni	0.002
B	0.0008	O	(0.001)
Be	(0.0003)	P	0.09
Bi	(0.001)	Pb	0.042
C	(0.002)	Pd	
Ca		Pr	
Cd	(0.0003)	Pt	
Ce		Re	
Co	(0.004)	Rh	
Cr	(0.001)	Ru	
Cu	75.4	S	0.0016
Fe	0.011	Sb	0.014
Ga		Se	(0.001)
Gd		Si	3.09
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	(0.003)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.0003)	Y	
Mn	(0.001)	Zn	21.3
Mo		Zr	(0.0004)
N	(0.0001)		

Ag	(0.002)	Na	
Al	0.022	Nb	
As	(<0.005)	Nd	
Au		Ni	0.01
B	(<0.005)	O	(<0.005)
Be	1.79	P	0.003
Bi	(<0.005)	Pb	0.005
C	(0.003)	Pd	
Ca		Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.344	Rh	
Cr	0.0007	Ru	
Cu	97.7	S	(0.001)
Fe	0.029	Sb	(0.001)
Ga		Se	(<0.005)
Gd		Si	0.057
Ge		Sn	0.0009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	
Li		W	
Mg	(0.0013)	Y	
Mn	0.0017	Zn	0.008
Mo	(<0.005)	Zr	(<0.005)
N	(<0.001)		

Ag	0.0011	Na	
Al	0.032	Nb	
As	(0.004)	Nd	
Au		Ni	0.237
B		O	
Be	1.89	P	0.0036
Bi	(0.0004)	Pb	(0.004)
C		Pd	
Ca		Pr	
Cd	0.004	Pt	
Ce		Re	
Co	0.0017	Rh	
Cr	0.0017	Ru	
Cu	(97.6)	S	0.001
Fe	0.071	Sb	0.0007
Ga		Se	(0.001)
Gd		Si	0.045
Ge		Sn	0.0007
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.112	Y	
Mn	0.0019	Zn	(0.003)
Mo		Zr	
N			

Copper

Name MBH-36X CBC2 F
Description Copper-Beryllium-Cobalt Alloy
Grade
UNS

Name MBH-36X CBC3 D
Description Copper-Beryllium-Cobalt Alloy
Grade
UNS

Name MBH-36X CBC4 E
Description Copper-Beryllium-Cobalt Alloy
Grade
UNS

Name MBH-36X CBC5 B
Description Copper-Beryllium-Cobalt Alloy
Grade
UNS

Name MBH-36X CBC6 A
Description Copper-Beryllium-Cobalt Alloy
Grade
UNS

Ag	0.0013	Na	
Al	0.0097	Nb	
As		Nd	
Au		Ni	0.121
B		O	
Be	0.439	P	0.0067
Bi		Pb	(0.001)
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	2.22	Rh	
Cr		Ru	
Cu	97.15	S	
Fe	0.0076	Sb	
Ga		Se	
Gd		Si	0.0257
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0036	Y	
Mn		Zn	0.0018
Mo		Zr	(0.001)
N			

Ag		Na	
Al	0.019	Nb	
As		Nd	
Au		Ni	0.007
B		O	
Be	1.84	P	
Bi		Pb	0.0025
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.209	Rh	
Cr		Ru	
Cu	97.77	S	
Fe	0.046	Sb	
Ga		Se	
Gd		Si	0.039
Ge		Sn	0.0021
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.004	Y	
Mn		Zn	0.004
Mo		Zr	
N			

Ag		Na	
Al	0.0258	Nb	
As		Nd	
Au		Ni	0.008
B		O	
Be	1.869	P	0.0027
Bi		Pb	0.329
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.215	Rh	
Cr		Ru	
Cu	97.47	S	
Fe	0.0274	Sb	
Ga		Se	
Gd		Si	0.048
Ge		Sn	0.002
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0035	Y	
Mn		Zn	0.003
Mo		Zr	
N			

Ag	0.0011	Na	
Al	0.0104	Nb	
As		Nd	
Au		Ni	1.905
B		O	
Be	0.404	P	
Bi		Pb	0.0015
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0084	Rh	
Cr		Ru	
Cu	97.61	S	
Fe	0.0108	Sb	
Ga		Se	
Gd		Si	0.004
Ge		Sn	0.0013
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0009	Y	
Mn		Zn	0.001
Mo		Zr	
N			

Ag	0.0015	Na	
Al	0.049	Nb	
As		Nd	
Au		Ni	1.132
B		O	
Be	0.507	P	0.0016
Bi		Pb	0.0014
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	1.045	Rh	
Cr		Ru	
Cu	97.11	S	
Fe	0.0243	Sb	
Ga		Se	
Gd		Si	0.0263
Ge		Sn	0.0041
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.007	Y	
Mn		Zn	0.001
Mo		Zr	0.0553
N			

Copper

Name IARM-279A ↓
Description Copper-Chromium Alloy
Grade CDA 182
UNS C18200

Name IARM-158B
Description Copper-Chromium Alloy
Grade CDA 815
UNS C81500

Name IARM-158C
Description Copper-Chromium Alloy
Grade CDA 815
UNS C81500

Name MBH-36X 274 B
Description Copper-Chromium Alloy
Grade CDA 815
UNS C81500

Name MBH-36X CCRI E ↓
Description Copper-Chromium Alloy
Grade
UNS

Ag	0.003	Na	
Al	0.002	Nb	
As	(0.002)	Nd	
Au		Ni	0.014
B		O	(0.001)
Be		P	0.005
Bi	(0.001)	Pb	0.01
C	0.002	Pd	
Ca		Pr	
Cd	(0.0005)	Pt	
Ce		Re	
Co	0.002	Rh	
Cr	0.86	Ru	
Cu	99.1	S	0.0015
Fe	0.025	Sb	(0.004)
Ga		Se	
Gd		Si	0.02
Ge		Sn	0.021
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.001)	Y	
Mn	(0.002)	Zn	0.01
Mo		Zr	0.012
N	(0.0003)		

Ag	(0.01)	Na	
Al	0.002	Nb	
As	(0.001)	Nd	
Au		Ni	0.32
B		O	0.002
Be		P	0.005
Bi		Pb	0.01
C	0.002	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.002	Rh	
Cr	0.85	Ru	
Cu	98.5	S	0.003
Fe	0.09	Sb	0.002
Ga		Se	
Gd		Si	0.02
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.019	Zn	0.014
Mo		Zr	
N	(<0.0005)		

Ag	(0.01)	Na	
Al	0.002	Nb	
As	(0.001)	Nd	
Au		Ni	0.32
B		O	0.002
Be		P	0.005
Bi		Pb	0.01
C	0.002	Pd	
Ca		Pr	
Cd	(0.005)	Pt	
Ce		Re	
Co	0.002	Rh	
Cr	1.04	Ru	
Cu	98.5	S	0.003
Fe	0.09	Sb	0.002
Ga		Se	
Gd		Si	0.02
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.019	Zn	0.014
Mo		Zr	
N	(<0.0005)		

Ag	0.0016	Na	
Al	0.0011	Nb	
As		Nd	
Au		Ni	2.59
B		O	
Be		P	0.0015
Bi		Pb	0.0011
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0042	Rh	
Cr	0.333	Ru	
Cu	96.44	S	
Fe	0.0164	Sb	
Ga		Se	
Gd		Si	0.645
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0004	Zn	(0.001)
Mo		Zr	
N			

Ag	0.0042	Na	
Al	0.0013	Nb	
As	0.0007	Nd	
Au		Ni	0.0111
B		O	
Be		P	0.0223
Bi		Pb	0.0008
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.652	Ru	
Cu	99.24	S	0.0016
Fe	0.017	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.0018
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.0003)	Y	
Mn		Zn	(0.001)
Mo		Zr	0.079
N			

Copper

Name IARM-84C
Description Copper-Nickel Alloy
Grade CDA 706
UNS C70600

Name IARM-85C ↓
Description Copper-Nickel Alloy
Grade CDA 715
UNS C71500

Name IARM-236A
Description Copper-Nickel Alloy
Grade CDA 964
UNS C96400

Name MBH-36X SP1 A
Description Copper-Nickel Alloy
Grade Spinodal Type Alloy
UNS C96800*

Name MBH-36X SP2 A
Description Copper-Nickel Alloy
Grade Spinodal Type Alloy
UNS C96800*

Ag	0.002	Na	
Al	(0.002)	Nb	
As	(0.002)	Nd	
Au		Ni	9.8
B		O	(0.008)
Be	(<0.002)	P	0.06
Bi	(<0.005)	Pb	0.047
C	0.003	Pd	0.047
Ca		Pr	
Cd	(0.001)	Pt	
Ce		Re	
Co	0.006	Rh	
Cr	(0.0008)	Ru	
Cu	89.4	S	0.006
Fe	0.28	Sb	0.0012
Ga		Se	(0.002)
Gd		Si	0.004
Ge		Sn	0.13
H		Sr	
Hf		Ta	
Hg		Te	(<0.03)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.0007)	Y	
Mn	0.04	Zn	0.13
Mo		Zr	(0.0004)
N			

Ag	(<0.002)	Na	
Al	(<0.01)	Nb	
As	0.0009	Nd	
Au		Ni	31.3
B		O	(0.003)
Be		P	0.003
Bi		Pb	0.004
C	0.008	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.016	Rh	
Cr	0.002	Ru	
Cu	67.3	S	0.002
Fe	0.63	Sb	
Ga		Se	
Gd		Si	0.01
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.01	Y	
Mn	0.65	Zn	0.057
Mo		Zr	
N	(<0.0003)		

Ag		Na	
Al	0.003	Nb	0.92
As		Nd	
Au		Ni	30
B		O	0.002
Be		P	0.003
Bi	0.003	Pb	0.004
C	0.01	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.004	Rh	
Cr	0.002	Ru	
Cu	66.7	S	0.003
Fe	0.91	Sb	(<0.005)
Ga		Se	
Gd		Si	0.19
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.04	Zn	0.002
Mo		Zr	
N	0.0002		

Ag	0.005	Na	
Al	0.002	Nb	(0.031)
As		Nd	
Au		Ni	8.33
B	0.0007	O	
Be		P	(0.003)
Bi	0.0039	Pb	0.0115
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.057	Rh	
Cr		Ru	
Cu	84.9	S	0.005
Fe	0.45	Sb	0.0177
Ga		Se	
Gd		Si	0.004
Ge		Sn	5.75
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.0004)
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.084	Zn	0.344
Mo		Zr	
N			

Ag	0.0181	Na	
Al	0.0003	Nb	
As		Nd	
Au		Ni	15.72
B	0.0005	O	
Be		P	(0.0006)
Bi	(0.0027)	Pb	0.026
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.119	Rh	
Cr		Ru	
Cu	74.91	S	0.003
Fe	(0.09)	Sb	0.006
Ga		Se	
Gd		Si	(0.0023)
Ge		Sn	8.92
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.0008)
Ir		Tl	
La		V	
Li		W	
Mg	0.0002	Y	
Mn	0.0019	Zn	0.029
Mo		Zr	
N			

Copper

Name MBH-36X 70600 A
Description Copper-Nickel Alloy
Grade
UNS

Name MBH-36X 71500 A
Description Copper-Nickel Alloy
Grade
UNS

Name MBH-36X CN10 C
Description Copper-Nickel Alloy
Grade
UNS

Name MBH-36X CN11 A
Description Copper-Nickel Alloy
Grade
UNS

Name MBH-36X CN12 A
Description Copper-Nickel Alloy
Grade
UNS

Ag		Na	
Al	(0.001)	Nb	
As		Nd	
Au		Ni	10.65
B		O	
Be		P	0.0062
Bi		Pb	0.0086
C	(0.002)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0087	Rh	
Cr		Ru	
Cu	86.7	S	0.0136
Fe	1.619	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.759	Zn	0.115
Mo		Zr	
N			

Ag		Na	
Al	(0.001)	Nb	
As		Nd	
Au		Ni	31.24
B	0.0049	O	
Be		P	0.0074
Bi		Pb	0.0114
C	0.024	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0163	Rh	
Cr		Ru	
Cu	66.74	S	0.0454
Fe	0.888	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.0113
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.85	Zn	0.15
Mo		Zr	
N			

Ag		Na	
Al		Nb	0.45
As		Nd	
Au		Ni	28.35
B	(0.012)	O	
Be		P	(0.009)
Bi		Pb	0.013
C	0.0107	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.122	Rh	
Cr	1.491	Ru	
Cu	61.67	S	0.03
Fe	4.76	Sb	
Ga		Se	
Gd		Si	0.906
Ge		Sn	0.0164
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.22)
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.552	Zn	0.058
Mo		Zr	0.08
N			

Ag		Na	
Al	1.457	Nb	0.124
As		Nd	
Au		Ni	14.96
B		O	
Be		P	(0.002)
Bi		Pb	(0.003)
C	(0.001)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0049	Rh	
Cr	0.38	Ru	
Cu	77.56	S	0.0012
Fe	0.992	Sb	
Ga		Se	
Gd		Si	0.083
Ge		Sn	(0.002)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0241	Y	
Mn	4.34	Zn	(0.006)
Mo		Zr	
N			

Ag		Na	
Al	2.41	Nb	0.001
As		Nd	
Au		Ni	13.05
B	0.0055	O	
Be		P	0.0011
Bi		Pb	0.0037
C	0.0101	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0056	Rh	
Cr		Ru	
Cu	83.79	S	
Fe	0.105	Sb	
Ga		Se	
Gd		Si	0.04
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.072	Y	
Mn	0.402	Zn	0.157
Mo		Zr	
N			

Copper

Name MBH-36X CN13 A
Description Copper-Nickel Alloy
Grade
UNS

Name MBH-36X CN2 K
Description Copper-Nickel Alloy
Grade
UNS

Name MBH-36X CN21 A
Description Copper-Nickel Alloy
Grade
UNS

Name MBH-36X CN22 A
Description Copper-Nickel Alloy
Grade
UNS

Name MBH-36X CN23 A
Description Copper-Nickel Alloy
Grade
UNS

Ag		Na	
Al	2.65	Nb	
As		Nd	
Au		Ni	14.52
B	(0.002)	O	
Be		P	0.0011
Bi		Pb	(0.001)
C	(0.003)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr		Ru	
Cu	81.46	S	(0.002)
Fe	0.87	Sb	
Ga		Se	
Gd		Si	0.012
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0039	Y	
Mn	0.442	Zn	0.0017
Mo		Zr	
N			

Ag		Na	
Al	0.0009	Nb	0.0176
As		Nd	
Au		Ni	11.45
B		O	
Be		P	0.0408
Bi		Pb	0.0449
C	0.0013	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.197	Rh	
Cr	0.0043	Ru	
Cu	86.25	S	0.01
Fe	0.0404	Sb	
Ga		Se	
Gd		Si	0.049
Ge		Sn	0.0258
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.035
Ir		Tl	
La		V	
Li		W	
Mg	0.03	Y	
Mn	(0.69)	Zn	1.03
Mo		Zr	
N			

Ag	0.0064	Na	
Al	1.95	Nb	
As	0.0067	Nd	
Au		Ni	5.5
B		O	
Be		P	0.053
Bi		Pb	0.051
C		Pd	
Ca		Pr	
Cd	0.0021	Pt	
Ce		Re	
Co	0.0079	Rh	
Cr	0.005	Ru	
Cu	92.17	S	
Fe	0.0316	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.038
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0391	Zn	0.0203
Mo		Zr	
N			

Ag	0.0196	Na	
Al	6.09	Nb	
As	0.0208	Nd	
Au		Ni	1.806
B		O	
Be		P	0.0178
Bi		Pb	0.026
C		Pd	
Ca		Pr	
Cd	0.0083	Pt	
Ce		Re	
Co	0.0231	Rh	
Cr	0.0144	Ru	
Cu	91.8	S	
Fe	0.088	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.0371
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.016)	Zn	0.0175
Mo		Zr	
N			

Ag	0.042	Na	
Al	0.007	Nb	
As	0.047	Nd	
Au		Ni	14.38
B		O	
Be		P	0.0299
Bi		Pb	0.115
C		Pd	
Ca		Pr	
Cd	0.0021	Pt	
Ce		Re	
Co	0.0509	Rh	
Cr	0.0021	Ru	
Cu	70.22	S	
Fe	0.14	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.102
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0095	Zn	14.88
Mo		Zr	
N			

Copper

Name MBH-36X CN24 A
Description Copper-Nickel Alloy
Grade
UNS

Ag	0.0466	Na	
Al	(0.001)	Nb	
As	(0.0011)	Nd	
Au		Ni	15.41
B		O	
Be		P	0.0037
Bi		Pb	0.0056
C	0.0436	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0096	Rh	
Cr	0.0065	Ru	
Cu	52.56	S	
Fe	0.127	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	(0.0023)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	23.6	Zn	8
Mo		Zr	
N			

Name MBH-36X CN3 M
Description Copper-Nickel Alloy
Grade
UNS

Ag		Na	
Al		Nb	0.03
As		Nd	
Au		Ni	19.55
B	(0.002)	O	
Be	0.0042	P	0.049
Bi		Pb	0.223
C	0.02	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0701	Rh	
Cr	0.0259	Ru	
Cu	76.6	S	0.0153
Fe	0.996	Sb	
Ga		Se	
Gd		Si	0.349
Ge		Sn	0.19
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.075	Y	
Mn	0.726	Zn	1.014
Mo		Zr	
N			

Name MBH-36X CN4 L
Description Copper-Nickel Alloy
Grade
UNS

Ag		Na	
Al	0.04	Nb	0.461
As		Nd	
Au		Ni	25.58
B		O	
Be		P	0.014
Bi	0.0096	Pb	0.0193
C	(0.005)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0305	Rh	
Cr	0.0273	Ru	
Cu	72.09	S	0.0075
Fe	0.548	Sb	
Ga		Se	
Gd		Si	0.448
Ge		Sn	0.0093
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.008	Y	
Mn	0.529	Zn	0.164
Mo		Zr	
N			

Name MBH-36X CN5 P
Description Copper-Nickel Alloy
Grade
UNS

Ag		Na	
Al		Nb	0.43
As		Nd	
Au		Ni	31.03
B	0.0053	O	
Be	0.0035	P	0.034
Bi		Pb	0.012
C	(0.008)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0238	Rh	
Cr	0.141	Ru	
Cu	66.67	S	0.088
Fe	0.347	Sb	
Ga		Se	
Gd		Si	0.689
Ge		Sn	0.009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0203
Ir		Tl	
La		V	
Li		W	
Mg	0.0106	Y	
Mn	0.217	Zn	0.209
Mo		Zr	
N			

Name MBH-36X CN7 F ↓
Description Copper-Nickel Alloy
Grade
UNS

Ag		Na	
Al		Nb	0.58
As		Nd	
Au		Ni	29.95
B	(0.004)	O	
Be		P	(0.021)
Bi	(0.014)	Pb	0.028
C	0.0106	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.108	Rh	
Cr	1.51	Ru	
Cu	65.58	S	0.0151
Fe	1.021	Sb	
Ga		Se	
Gd		Si	0.304
Ge		Sn	0.039
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.037)
Ir		Tl	
La		V	
Li		W	
Mg	0.0041	Y	
Mn	0.659	Zn	0.203
Mo		Zr	(0.003)
N			

Copper

Name MBH-36X CN8 J
Description Copper-Nickel Alloy
Grade
UNS

Name IARM-265A
Description Copper-Tin Alloy
Grade Federalloy I-836
UNS C89833

Name IARM-264A
Description Copper-Tin Alloy
Grade Federalloy I-844
UNS C89831

Name IARM-263A
Description Copper-Tin Alloy
Grade Federalloy I-848A
UNS

Name IARM-266A
Description Copper-Tin Alloy
Grade Federalloy III-932
UNS C89835

Ag		Na	
Al	(0.03)	Nb	0.585
As		Nd	
Au		Ni	28.94
B	0.005	O	
Be		P	0.019
Bi	0.0518	Pb	0.037
C	0.013	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.121	Rh	
Cr	1.38	Ru	
Cu	65.78	S	0.0119
Fe	1.65	Sb	
Ga		Se	
Gd		Si	0.309
Ge		Sn	0.0502
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.038)
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.951	Zn	0.107
Mo		Zr	
N			

Ag	(0.002)	Na	
Al	0.003	Nb	
As	(0.005)	Nd	
Au		Ni	0.69
B		O	
Be		P	0.024
Bi	2.4	Pb	0.011
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	(0.001)	Ru	
Cu	(90)	S	(0.002)
Fe	0.013	Sb	0.015
Ga		Se	(0.002)
Gd		Si	0.003
Ge		Sn	4.4
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.002)	Zn	2.45
Mo		Zr	
N			

Ag	(0.005)	Na	
Al	0.003	Nb	
As	(0.004)	Nd	
Au		Ni	0.54
B		O	
Be		P	0.027
Bi	3.6	Pb	0.057
C	(0.004)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.001	Rh	
Cr	(0.002)	Ru	
Cu	(87.3)	S	0.0013
Fe	0.048	Sb	0.074
Ga		Se	(0.001)
Gd		Si	0.003
Ge		Sn	3.03
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.002	Zn	5.33
Mo		Zr	
N			

Ag	0.006	Na	
Al	0.002	Nb	
As	0.003	Nd	
Au		Ni	0.66
B		O	
Be		P	0.04
Bi	2.55	Pb	0.022
C	(<0.005)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.001	Rh	
Cr	0.002	Ru	
Cu	(78)	S	0.002
Fe	0.047	Sb	0.06
Ga		Se	0.002
Gd		Si	0.003
Ge		Sn	3.5
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.002	Zn	15.8
Mo		Zr	
N			

Ag	0.001	Na	
Al	0.002	Nb	
As	0.004	Nd	
Au		Ni	0.46
B		O	
Be		P	0.032
Bi	2.37	Pb	0.01
C	0.002	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	(0.002)	Ru	
Cu	(87)	S	0.002
Fe	0.035	Sb	0.01
Ga		Se	0.001
Gd		Si	0.002
Ge		Sn	6.9
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.002	Zn	3.48
Mo		Zr	
N			

Copper

Name	IARM-70C
Description	Electrolytic Tough Pitch Copper
Grade	CDA 110
UNS	C11000

Name	IARM-CuH130-18
Description	Hiduron 130 (Hidurax Special)
Grade	Hiduron 130 (Hidurax Special)
UNS	C72420

Name	IARM-CuH191-18
Description	Hiduron 191
Grade	Hiduron 191
UNS	C72420

Name	IARM-159A
Description	High Strength Copper Alloy
Grade	NARloy-A
UNS	

Name	IARM-160A
Description	High Strength Copper Alloy
Grade	NARloy-Z
UNS	

Ag	0.0011	Na	
Al	0.0014	Nb	(0.004)
As	0.0009	Nd	
Au		Ni	(0.0004)
B	(0.0004)	O	(0.002)
Be	(<0.002)	P	0.0014
Bi	(0.002)	Pb	0.0013
C	0.002	Pd	
Ca		Pr	
Cd	(0.0008)	Pt	
Ce		Re	
Co	0.0014	Rh	
Cr	(0.0002)	Ru	
Cu	99.94	S	0.0008
Fe	0.0016	Sb	(0.003)
Ga		Se	(0.001)
Gd		Si	0.0006
Ge	(<0.0002)	Sn	0.0005
H		Sr	
Hf		Ta	
Hg		Te	(0.001)
In	(<0.0001)	Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.0003)	Y	
Mn	(0.0002)	Zn	(0.002)
Mo		Zr	(0.001)
N	(<0.008)		

Ag	(0.001)	Na	
Al	2.76	Nb	(<0.005)
As	(0.006)	Nd	
Au		Ni	14.6
B	(0.0009)	O	(0.0006)
Be		P	0.004
Bi	(0.002)	Pb	(0.002)
C	0.006	Pd	
Ca		Pr	
Cd	(0.003)	Pt	
Ce		Re	
Co	0.004	Rh	
Cr		Ru	
Cu	80.9	S	(0.001)
Fe	0.84	Sb	(0.003)
Ga		Se	0.0014
Gd		Si	0.024
Ge		Sn	(0.001)
H	(<0.001)	Sr	
Hf		Ta	(<0.001)
Hg		Te	
In		Ti	(0.001)
Ir		Tl	
La		V	(<0.005)
Li		W	(<0.001)
Mg	0.013	Y	
Mn	0.45	Zn	0.0015
Mo	(<0.005)	Zr	(0.0008)
N	(0.0006)		

Ag	(0.002)	Na	
Al	1.6	Nb	(<0.005)
As	(<0.01)	Nd	
Au		Ni	14.5
B	(<0.003)	O	(<0.001)
Be		P	0.003
Bi	(0.002)	Pb	(0.003)
C	0.004	Pd	
Ca		Pr	
Cd	(0.001)	Pt	
Ce		Re	
Co	0.002	Rh	
Cr	0.0013	Ru	
Cu	(79.6)	S	0.002
Fe	0.96	Sb	(<0.005)
Ga		Se	(0.003)
Gd		Si	0.017
Ge		Sn	(0.002)
H	(<0.001)	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	(<0.005)
Li		W	(<0.001)
Mg	0.0059	Y	
Mn	3.79	Zn	0.001
Mo	(<0.005)	Zr	(<0.001)
N	(<0.001)		

Ag	3.48	Na	
Al	(<0.01)	Nb	
As		Nd	
Au		Ni	(<0.01)
B		O	0.0006
Be		P	(<0.01)
Bi		Pb	(<0.01)
C	(0.002)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.01)	Rh	
Cr	(<0.01)	Ru	
Cu	(96.5)	S	(<0.01)
Fe	(<0.01)	Sb	
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	(<0.01)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.01)	Zn	(<0.01)
Mo		Zr	
N	0.0003		

Ag	3.03	Na	
Al	(<0.01)	Nb	
As		Nd	
Au		Ni	(<0.01)
B		O	0.003
Be		P	(0.004)
Bi		Pb	(<0.01)
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.01)	Rh	
Cr	(<0.01)	Ru	
Cu	(96.6)	S	(<0.003)
Fe	(<0.01)	Sb	
Ga		Se	
Gd		Si	(<0.01)
Ge		Sn	(<0.01)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.01)	Zn	(<0.01)
Mo		Zr	0.4
N	0.002		

Copper

Name IARM-CuMb1-18
Description Magnolia B-1
Grade Magnolia B-1
UNS C89320

Name IARM-Cu715-20
Description Monel 450
Grade CDA 715
UNS C71500

Name IARM-Cu485-18
Description Naval Brass
Grade CDA 485
UNS C48500

Name IARM-298A
Description Nickel-Silver
Grade CDA 976
UNS C97600

Name MBH-34X 79830 A
Description Nickel-Silver
Grade
UNS

Ag	(<0.003)	Na	
Al	0.0012	Nb	(<0.009)
As	(<0.008)	Nd	
Au		Ni	0.58
B	(<0.005)	O	0.003
Be	(<0.005)	P	0.049
Bi	4.51	Pb	0.015
C	(0.002)	Pd	
Ca	(<0.005)	Pr	
Cd	(0.0005)	Pt	
Ce		Re	
Co	(<0.002)	Rh	
Cr	(<0.008)	Ru	
Cu	88.98	S	0.002
Fe	0.0016	Sb	0.003
Ga		Se	0.0025
Gd		Si	(<0.001)
Ge		Sn	5.58
H	(<0.001)	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	(<0.005)
Li		W	(<0.005)
Mg	(<0.001)	Y	
Mn	(0.005)	Zn	0.47
Mo		Zr	(<0.005)
N	(0.0006)		

Ag	(0.001)	Na	
Al	(0.004)	Nb	(<0.005)
As	(0.01)	Nd	
Au		Ni	31
B	(<0.005)	O	(0.001)
Be		P	0.009
Bi	(0.004)	Pb	(0.001)
C	0.005	Pd	
Ca		Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.004	Rh	
Cr	(0.002)	Ru	
Cu	67.4	S	0.002
Fe	0.51	Sb	(0.001)
Ga		Se	(<0.005)
Gd		Si	0.09
Ge		Sn	0.004
H	(<0.001)	Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.073
Ir		Tl	
La		V	(<0.005)
Li		W	
Mg	0.005	Y	
Mn	0.8	Zn	(0.007)
Mo	(<0.005)	Zr	(<0.005)
N	(0.001)		

Ag	(0.0031)	Na	
Al	0.002	Nb	(<0.005)
As	0.055	Nd	
Au		Ni	0.013
B	(<0.005)	O	(0.002)
Be	(<0.005)	P	(0.002)
Bi	(0.001)	Pb	1.76
C	0.002	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	0.0005	Pt	
Ce		Re	
Co	(0.0005)	Rh	
Cr	(<0.001)	Ru	
Cu	60.8	S	(0.0019)
Fe	0.062	Sb	0.0018
Ga		Se	(0.003)
Gd		Si	0.003
Ge		Sn	0.759
H	(<0.001)	Sr	
Hf	(<0.001)	Ta	(<0.001)
Hg		Te	
In		Ti	(0.001)
Ir		Tl	
La		V	(<0.005)
Li		W	(<0.001)
Mg	(0.0001)	Y	(<0.001)
Mn	0.0013	Zn	36.5
Mo	(<0.005)	Zr	(<0.005)
N	(0.001)		

Ag	0.009	Na	
Al	0.003	Nb	(<0.01)
As	0.004	Nd	
Au		Ni	19.6
B	(<0.005)	O	(<0.005)
Be	(<0.001)	P	0.004
Bi	0.014	Pb	4
C	0.013	Pd	
Ca		Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.016	Rh	
Cr	0.005	Ru	
Cu	65.3	S	0.011
Fe	0.73	Sb	0.04
Ga		Se	(<0.02)
Gd		Si	0.019
Ge		Sn	4
H		Sr	
Hf		Ta	
Hg		Te	(<0.005)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0004	Y	
Mn	0.34	Zn	5.8
Mo		Zr	(<0.01)
N	(<0.001)		

Ag	0.0028	Na	
Al	0.0012	Nb	
As		Nd	
Au		Ni	9.76
B		O	
Be		P	0.0047
Bi		Pb	2.033
C	(0.005)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr		Ru	
Cu	45.88	S	(0.001)
Fe	0.079	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.1158
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.311	Zn	41.8
Mo		Zr	
N			

Copper

Name MBH-31X TB1 L ♦
Description Phosphor-Copper
Grade
UNS

Name IARM-278A
Description Phosphorus Deoxidized Copper
Grade CDA 145
UNS C14500

Name MBH-37X 218 B
Description Various Copper Alloy
Grade
UNS

Name MBH-37X 65500 A
Description Various Copper Alloy
Grade
UNS

Ag	0.061	Na	
Al	0.174	Nb	
As	0.052	Nd	
Au		Ni	0.199
B	0.0005	O	
Be		P	0.008
Bi	0.049	Pb	0.325
C		Pd	
Ca		Pr	
Cd	0.0122	Pt	
Ce		Re	
Co	0.0017	Rh	
Cr	0.0024	Ru	
Cu	61.5	S	(0.002)
Fe	0.072	Sb	0.101
Ga		Se	0.0008
Gd		Si	0.097
Ge		Sn	0.214
H		Sr	
Hf		Ta	
Hg		Te	(0.004)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.287	Zn	36.8
Mo		Zr	(0.001)
N			

Ag	(0.001)	Na	
Al	(<0.002)	Nb	
As	(0.001)	Nd	
Au		Ni	(<0.005)
B		O	(0.0004)
Be		P	0.011
Bi	(0.001)	Pb	0.003
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.001	Rh	
Cr	(0.001)	Ru	
Cu	99.5	S	0.002
Fe	0.004	Sb	(<0.005)
Ga		Se	
Gd		Si	0.002
Ge		Sn	0.001
H		Sr	
Hf		Ta	
Hg		Te	0.53
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	(0.0005)	Y	
Mn	(0.0004)	Zn	0.002
Mo		Zr	
N	(0.0001)		

Ag		Na	
Al	0.0018	Nb	
As		Nd	
Au		Ni	1.892
B		O	
Be		P	
Bi		Pb	0.0014
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.176	Ru	
Cu	97.29	S	
Fe	0.0209	Sb	
Ga		Se	
Gd		Si	0.564
Ge		Sn	0.0032
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0022	Zn	0.0054
Mo		Zr	
N			

Ag		Na	
Al	0.0028	Nb	
As		Nd	
Au		Ni	0.0059
B		O	
Be		P	0.0046
Bi		Pb	0.0034
C	(0.004)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0029	Ru	
Cu	95.75	S	0.001
Fe	0.035	Sb	
Ga		Se	
Gd		Si	3.13
Ge		Sn	0.0426
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.96	Zn	0.0353
Mo		Zr	
N			

Section 6

Carbon Steel

Name IARM-213C
Description Carbon Steel
Grade A36
UNS K02600

Name IARM-213D
Description Carbon Steel
Grade A36
UNS K02600

Name IARM-28A ↓
Description Carbon Steel
Grade AISI 1018
UNS G10180

Name IARM-28B ↓
Description Carbon Steel
Grade AISI 1018
UNS G10180

Name IARM-28D ↓
Description Carbon Steel
Grade AISI 1018
UNS G10180

Ag		Na	
Al	0.0019	Nb	0.0011
As	0.0058	Nd	
Au		Ni	0.068
B	0.0003	O	0.0042
Be		P	0.007
Bi		Pb	0.0011
C	0.201	Pd	
Ca	0.0014	Pr	
Cd		Pt	
Ce		Re	
Co	0.0074	Rh	
Cr	0.099	Ru	
Cu	0.149	S	0.025
Fe		Sb	0.002
Ga		Se	
Gd		Si	0.25
Ge		Sn	0.0081
H		Sr	
Hf		Ta	(0.007)
Hg		Te	
In		Ti	0.001
Ir		Tl	
La		V	0.035
Li		W	0.002
Mg		Y	
Mn	0.922	Zn	(0.006)
Mo	0.022	Zr	(0.0004)
N	0.0116		

Ag		Na	
Al	0.003	Nb	0.0012
As	(0.006)	Nd	
Au		Ni	0.076
B	(0.0004)	O	(0.01)
Be		P	0.012
Bi		Pb	(<0.001)
C	0.158	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.009	Rh	
Cr	0.093	Ru	
Cu	0.207	S	0.031
Fe		Sb	(0.0032)
Ga		Se	
Gd		Si	0.226
Ge		Sn	0.0147
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.0011
Ir		Tl	
La		V	0.001
Li		W	0.003
Mg		Y	
Mn	0.725	Zn	(0.002)
Mo	0.0131	Zr	(0.0015)
N	0.008		

Ag		Na	
Al	0.003	Nb	0.002
As	(0.006)	Nd	
Au		Ni	0.099
B	(0.0001)	O	(0.0106)
Be		P	0.011
Bi		Pb	(<0.005)
C	0.2	Pd	
Ca	(0.0004)	Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.15	Ru	
Cu	0.247	S	0.023
Fe		Sb	(<0.01)
Ga		Se	
Gd		Si	0.22
Ge		Sn	0.011
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.006
Li		W	(0.012)
Mg		Y	
Mn	0.69	Zn	
Mo	0.031	Zr	(0.002)
N	0.0113		

Ag		Na	
Al	0.0037	Nb	0.002
As	0.008	Nd	
Au		Ni	0.13
B	0.0002	O	0.007
Be		P	0.01
Bi		Pb	(<0.01)
C	0.18	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	0.13	Ru	
Cu	0.36	S	0.029
Fe		Sb	
Ga		Se	
Gd		Si	0.23
Ge		Sn	0.014
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	(0.002)
Li		W	(<0.01)
Mg		Y	
Mn	0.75	Zn	
Mo	0.029	Zr	(<0.005)
N	0.0094		

Ag		Na	
Al	0.011	Nb	0.002
As	0.0039	Nd	
Au		Ni	0.09
B	0.0002	O	0.006
Be		P	0.01
Bi		Pb	
C	0.17	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.009	Rh	
Cr	0.081	Ru	
Cu	0.11	S	0.016
Fe		Sb	
Ga		Se	
Gd		Si	0.27
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.001
Ir		Tl	
La		V	0.019
Li		W	(0.003)
Mg		Y	
Mn	0.8	Zn	
Mo	0.025	Zr	
N	0.0079		

Carbon Steel

Name	IARM-28E ↓
Description	Carbon Steel
Grade	AISI 1018
UNS	G10180

Name	IARM-28K
Description	Carbon Steel
Grade	AISI 1018
UNS	G10180

Name	IARM-359A
Description	Carbon Steel
Grade	AISI 1026
UNS	G10260

Name	IARM-209D
Description	Carbon Steel
Grade	AISI 1030
UNS	G10300

Name	IARM-360A
Description	Carbon Steel
Grade	AISI 1035
UNS	G10350

Ag		Na	
Al	0.011	Nb	0.001
As	0.007	Nd	
Au		Ni	0.145
B	0.0001	O	0.0052
Be		P	0.009
Bi		Pb	(<0.001)
C	0.169	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.008	Rh	
Cr	0.079	Ru	
Cu	0.12	S	0.0026
Fe		Sb	(<0.001)
Ga		Se	
Gd		Si	0.171
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.001
Ir		Tl	
La		V	0.019
Li		W	0.002
Mg		Y	
Mn	0.68	Zn	
Mo	0.033	Zr	(<0.002)
N	0.0088		

Ag		Na	
Al	0.0025	Nb	0.0017
As	0.005	Nd	
Au		Ni	0.0638
B	0.0005	O	0.005
Be		P	0.012
Bi	(<0.020)	Pb	(<0.001)
C	0.174	Pd	
Ca	(<0.002)	Pr	
Cd	(<0.002)	Pt	
Ce		Re	
Co	0.006	Rh	
Cr	0.107	Ru	
Cu	0.171	S	0.027
Fe		Sb	(<0.004)
Ga		Se	(<0.005)
Gd		Si	0.291
Ge		Sn	0.0075
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.0014
Li		W	(0.004)
Mg	(<0.002)	Y	
Mn	0.8	Zn	(0.002)
Mo	0.021	Zr	(0.0016)
N	0.008		

Ag		Na	
Al	0.002	Nb	0.002
As	0.0073	Nd	
Au		Ni	0.068
B	0.0003	O	0.0044
Be		P	0.0094
Bi		Pb	(0.001)
C	0.267	Pd	
Ca	0.0013	Pr	
Cd		Pt	
Ce		Re	
Co	0.0069	Rh	
Cr	0.121	Ru	
Cu	0.186	S	0.02
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.233
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0009
Ir		Tl	
La		V	0.027
Li		W	(0.001)
Mg	(0.0005)	Y	
Mn	0.686	Zn	
Mo	0.023	Zr	(0.001)
N	0.0094		

Ag		Na	
Al	0.003	Nb	0.0014
As	0.006	Nd	
Au		Ni	0.079
B	0.0002	O	0.005
Be		P	0.0084
Bi		Pb	0.001
C	0.322	Pd	
Ca	0.002	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	0.137	Ru	
Cu	0.243	S	0.021
Fe		Sb	0.004
Ga		Se	
Gd		Si	0.268
Ge		Sn	0.012
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0011
Ir		Tl	
La		V	0.042
Li		W	0.002
Mg		Y	
Mn	0.68	Zn	(0.003)
Mo	0.037	Zr	
N	0.0107		

Ag		Na	
Al	0.0016	Nb	0.0015
As	0.006	Nd	
Au		Ni	0.078
B	0.0004	O	0.004
Be		P	0.008
Bi		Pb	(0.001)
C	0.331	Pd	
Ca	0.0017	Pr	
Cd		Pt	
Ce		Re	
Co	0.0067	Rh	
Cr	0.113	Ru	
Cu	0.235	S	0.023
Fe		Sb	0.0023
Ga		Se	
Gd		Si	0.26
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.001
Ir		Tl	
La		V	0.039
Li		W	(0.001)
Mg	(0.0003)	Y	
Mn	0.733	Zn	(0.003)
Mo	0.024	Zr	(0.001)
N	0.0102		

Carbon Steel

Name IARM-210D
Description Carbon Steel
Grade AISI 1040
UNS G10400

Name IARM-200D
Description Carbon Steel
Grade AISI 1045
UNS G10450

Name IARM-373A
Description Carbon Steel
Grade AISI 1060
UNS G10600

Name IARM-Fe1215-18 ♦
Description Carbon Steel
Grade AISI 1215
UNS G12150

Name IARM-349A
Description Carbon Steel
Grade AISI 1541
UNS G15410

Ag		Na	
Al	0.002	Nb	0.001
As	0.0059	Nd	
Au		Ni	0.122
B	0.0004	O	0.0034
Be		P	0.0052
Bi		Pb	0.001
C	0.412	Pd	
Ca	0.0009	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	0.096	Ru	
Cu	0.273	S	0.03
Fe		Sb	0.002
Ga		Se	
Gd		Si	0.23
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0104
Ir		Tl	
La		V	0.024
Li		W	0.002
Mg	(0.001)	Y	
Mn	0.73	Zn	
Mo	0.034	Zr	(0.001)
N	0.011		

Ag		Na	
Al	0.004	Nb	0.001
As	0.005	Nd	
Au		Ni	0.097
B	(0.0002)	O	(0.004)
Be		P	0.0103
Bi		Pb	(<0.002)
C	0.453	Pd	
Ca	(0.0009)	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	0.109	Ru	
Cu	0.232	S	0.024
Fe		Sb	(0.0019)
Ga		Se	
Gd		Si	0.225
Ge		Sn	0.0079
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.00013
Ir		Tl	
La		V	0.0244
Li		W	0.003
Mg	(<0.001)	Y	
Mn	0.749	Zn	(0.002)
Mo	0.0217	Zr	(0.001)
N	0.009		

Ag		Na	
Al	0.002	Nb	0.001
As	0.0046	Nd	
Au		Ni	0.048
B	0.0003	O	0.002
Be		P	0.0123
Bi		Pb	(0.001)
C	0.625	Pd	
Ca	0.0005	Pr	
Cd		Pt	
Ce		Re	
Co	0.005	Rh	
Cr	0.096	Ru	
Cu	0.107	S	0.031
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.22
Ge		Sn	0.0069
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0017
Ir		Tl	
La		V	0.023
Li		W	0.002
Mg	(0.0004)	Y	
Mn	0.7	Zn	(0.003)
Mo	0.0176	Zr	(0.003)
N	0.0088		

Ag		Na	
Al	(0.002)	Nb	0.0012
As	0.0043	Nd	
Au		Ni	0.055
B	(0.001)	O	0.01
Be		P	0.059
Bi	(<0.01)	Pb	(0.002)
C	0.043	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0055	Rh	
Cr	0.051	Ru	
Cu	0.164	S	0.29
Fe	(98.4)	Sb	0.0018
Ga		Se	(<0.01)
Gd		Si	(0.006)
Ge		Sn	0.0083
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0007
Ir		Tl	
La		V	0.002
Li		W	(0.003)
Mg	(<0.005)	Y	
Mn	0.96	Zn	(0.005)
Mo	0.016	Zr	(0.001)
N	0.0109		

Ag		Na	
Al	0.002	Nb	0.0012
As	0.005	Nd	
Au		Ni	0.178
B	0.0003	O	0.003
Be		P	0.011
Bi		Pb	(0.001)
C	0.41	Pd	
Ca	0.0015	Pr	
Cd		Pt	
Ce		Re	
Co	0.0085	Rh	
Cr	0.189	Ru	
Cu	0.3	S	0.025
Fe		Sb	0.003
Ga		Se	
Gd		Si	0.192
Ge		Sn	0.015
H		Sr	
Hf		Ta	(0.007)
Hg		Te	
In		Ti	0.0013
Ir		Tl	
La		V	0.027
Li		W	0.004
Mg	(0.0004)	Y	
Mn	1.49	Zn	(0.003)
Mo	0.059	Zr	(0.002)
N	0.01		

Carbon Steel

Name IARM-183C
Description Rephosphorized and Resulfurized Carbon Steel
Grade AISI 12L14
UNS G12144

Name MBH-12X 10180 B
Description Residuals in Mild Steel
Grade
UNS

Name MBH-12X 10180 C
Description Residuals in Mild Steel
Grade
UNS

Name MBH-12X 10400 A ↓
Description Residuals in Mild Steel
Grade
UNS

Name MBH-12X 10550 A
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.0021	Nb	0.001
As	0.003	Nd	
Au		Ni	0.019
B	0.0011	O	0.016
Be		P	0.078
Bi	(<0.001)	Pb	0.18
C	0.079	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.002)	Rh	
Cr	0.055	Ru	
Cu	0.016	S	0.31
Fe		Sb	(0.001)
Ga		Se	
Gd		Si	0.004
Ge		Sn	0.003
H		Sr	
Hf		Ta	(<0.001)
Hg		Te	
In		Ti	0.0009
Ir		Tl	
La		V	0.002
Li		W	(0.002)
Mg	(<0.0005)	Y	
Mn	1.06	Zn	(<0.001)
Mo	0.01	Zr	0.001
N	0.0049		

Ag		Na	
Al	0.043	Nb	
As	0.0059	Nd	
Au		Ni	0.0333
B		O	
Be		P	0.0101
Bi		Pb	
C	0.169	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0451	Ru	
Cu	0.0544	S	0.0056
Fe		Sb	
Ga		Se	
Gd		Si	0.114
Ge		Sn	0.0065
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.722	Zn	0.0079
Mo	0.0062	Zr	
N	0.0071		

Ag		Na	
Al	0.0198	Nb	
As	0.0029	Nd	
Au		Ni	0.0284
B		O	
Be		P	0.015
Bi		Pb	
C	0.171	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0793	Ru	
Cu	0.05	S	0.02
Fe		Sb	
Ga		Se	
Gd		Si	0.147
Ge		Sn	0.0024
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.803	Zn	0.0005
Mo	0.0047	Zr	
N	0.0051		

Ag		Na	
Al	0.0323	Nb	
As	0.0068	Nd	
Au		Ni	0.0631
B		O	
Be		P	0.0137
Bi		Pb	
C	0.42	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.139	Ru	
Cu	0.14	S	0.0305
Fe		Sb	
Ga		Se	
Gd		Si	0.22
Ge		Sn	0.0127
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.754	Zn	0.0033
Mo	0.0169	Zr	
N	0.0133		

Ag		Na	
Al	0.0325	Nb	
As	0.0059	Nd	
Au		Ni	0.0247
B		O	
Be		P	0.0184
Bi		Pb	
C	0.549	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.338	Ru	
Cu	0.029	S	0.0055
Fe		Sb	
Ga		Se	
Gd		Si	0.281
Ge		Sn	0.0018
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.685	Zn	(0.002)
Mo	0.0086	Zr	
N	0.0051		

Carbon Steel

Name MBH-12X 12700 A
Description Residuals in Mild Steel
Grade
UNS

Name MBH-12X 12746 V
Description Residuals in Mild Steel
Grade
UNS

Name MBH-12X 12747 V
Description Residuals in Mild Steel
Grade
UNS

Name MBH-12X 12749 X
Description Residuals in Mild Steel
Grade
UNS

Name MBH-12X 12750 U
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.055	Nb	
As	0.006	Nd	
Au		Ni	0.0197
B		O	
Be		P	0.0205
Bi		Pb	
C	0.365	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0047	Rh	
Cr	0.07	Ru	
Cu	0.0342	S	0.0116
Fe		Sb	
Ga		Se	
Gd		Si	0.238
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0033
Li		W	
Mg		Y	
Mn	0.636	Zn	0.012
Mo	0.0345	Zr	
N	0.0073		

Ag		Na	
Al	0.459	Nb	
As	0.051	Nd	
Au		Ni	0.226
B		O	
Be		P	0.0347
Bi		Pb	
C	0.048	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.142	Rh	
Cr	0.374	Ru	
Cu	0.646	S	0.064
Fe		Sb	
Ga		Se	
Gd		Si	0.156
Ge		Sn	0.264
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.088
Ir		Tl	
La		V	0.0208
Li		W	0.105
Mg		Y	
Mn	1.198	Zn	
Mo	0.658	Zr	
N			

Ag		Na	
Al	0.0271	Nb	
As	0.0075	Nd	
Au		Ni	0.494
B		O	
Be		P	0.0648
Bi		Pb	
C	0.201	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.211	Rh	
Cr	0.58	Ru	
Cu	0.232	S	0.0275
Fe		Sb	
Ga		Se	
Gd		Si	0.298
Ge		Sn	0.144
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.099
Ir		Tl	
La		V	0.0272
Li		W	0.0276
Mg		Y	
Mn	1.24	Zn	
Mo	0.606	Zr	
N	0.025		

Ag		Na	
Al	0.195	Nb	
As	0.085	Nd	
Au		Ni	0.475
B		O	
Be		P	0.025
Bi		Pb	
C	0.175	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.435	Rh	
Cr	0.455	Ru	
Cu	0.25	S	0.062
Fe		Sb	
Ga		Se	
Gd		Si	0.47
Ge		Sn	0.018
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.018
Ir		Tl	
La		V	0.069
Li		W	0.035
Mg		Y	
Mn	1.37	Zn	
Mo	0.19	Zr	
N			

Ag		Na	
Al	0.253	Nb	0.111
As		Nd	
Au		Ni	0.786
B		O	
Be		P	0.0078
Bi		Pb	
C	0.258	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.581	Rh	
Cr	0.792	Ru	
Cu	0.106	S	0.0053
Fe		Sb	
Ga		Se	
Gd		Si	0.599
Ge		Sn	0.11
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.159
Ir		Tl	
La		V	0.102
Li		W	0.1
Mg		Y	
Mn	0.51	Zn	
Mo	0.088	Zr	
N			

Carbon Steel

Name MBH-12X 15180 A
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.018	Nb	
As	0.0117	Nd	
Au		Ni	0.103
B		O	
Be		P	0.011
Bi		Pb	
C	0.17	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.118	Ru	
Cu	0.141	S	0.0022
Fe		Sb	
Ga		Se	
Gd		Si	0.212
Ge		Sn	0.0115
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.196	Zn	0.0016
Mo	0.0231	Zr	
N	0.0051		

Name MBH-12X 15240 A
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.0188	Nb	
As	0.0106	Nd	
Au		Ni	0.0761
B		O	
Be		P	0.0152
Bi		Pb	
C	0.201	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.1032	Ru	
Cu	0.2	S	0.0201
Fe		Sb	
Ga		Se	
Gd		Si	0.198
Ge		Sn	0.0153
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.002
Li		W	
Mg		Y	
Mn	1.496	Zn	0.002
Mo	0.0166	Zr	
N	0.007		

Name MBH-12X 349 E
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.154	Nb	
As	0.0107	Nd	
Au		Ni	0.216
B		O	
Be		P	0.0119
Bi		Pb	
C	0.319	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0194	Rh	
Cr	0.131	Ru	
Cu	0.156	S	0.0128
Fe		Sb	
Ga		Se	
Gd		Si	0.256
Ge		Sn	0.115
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.09
Ir		Tl	
La		V	0.0262
Li		W	0.093
Mg		Y	
Mn	0.6	Zn	
Mo	0.077	Zr	
N			

Name MBH-12X 350 C
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.29	Nb	
As	0.057	Nd	
Au		Ni	0.16
B		O	
Be		P	0.0296
Bi		Pb	
C	0.159	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0304	Rh	
Cr	0.335	Ru	
Cu	0.196	S	0.0408
Fe		Sb	
Ga		Se	
Gd		Si	0.467
Ge		Sn	0.0382
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.076
Ir		Tl	
La		V	0.0115
Li		W	0.26
Mg		Y	
Mn	0.758	Zn	
Mo	0.147	Zr	
N			

Name MBH-12X 353 G
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.0485	Nb	0.0641
As	0.0461	Nd	
Au		Ni	0.214
B		O	
Be		P	0.0099
Bi	0.0246	Pb	
C	0.111	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.024	Rh	
Cr	0.701	Ru	
Cu	0.232	S	0.0147
Fe		Sb	0.138
Ga		Se	0.0192
Gd		Si	0.207
Ge		Sn	0.113
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0387
Ir		Tl	
La		V	0.0189
Li		W	0.135
Mg		Y	
Mn	0.726	Zn	
Mo	0.1063	Zr	
N	0.0027		

Carbon Steel

Name MBH-12X 354 B
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.015	Nb	0.0802
As	0.023	Nd	
Au		Ni	0.082
B		O	
Be		P	0.0478
Bi		Pb	
C	0.252	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0237	Rh	
Cr	0.0487	Ru	
Cu	0.0679	S	0.0105
Fe		Sb	
Ga		Se	
Gd		Si	0.2
Ge		Sn	0.0154
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0248
Ir		Tl	
La		V	0.0204
Li		W	0.0248
Mg		Y	
Mn	5.03	Zn	
Mo	0.0328	Zr	
N	0.0027		

Name MBH-12X 355 C
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.1104	Nb	0.023
As	0.0331	Nd	
Au		Ni	0.071
B		O	
Be		P	0.0214
Bi		Pb	
C	0.159	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0495	Rh	
Cr	0.113	Ru	
Cu	0.657	S	0.0241
Fe		Sb	0.0796
Ga		Se	0.0395
Gd		Si	0.494
Ge		Sn	0.0564
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.153
Ir		Tl	
La		V	0.1265
Li		W	0.037
Mg		Y	
Mn	0.508	Zn	
Mo	0.101	Zr	
N	0.0023		

Name MBH-12X 356 D
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.034	Nb	0.017
As	0.025	Nd	
Au		Ni	0.07
B		O	
Be		P	0.058
Bi	0.005	Pb	
C	0.23	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.11	Rh	
Cr	0.24	Ru	
Cu	0.4	S	0.037
Fe		Sb	0.021
Ga		Se	0.009
Gd		Si	0.24
Ge		Sn	0.038
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.015
Ir		Tl	
La		V	0.07
Li		W	0.087
Mg		Y	
Mn	0.32	Zn	0.011
Mo	0.03	Zr	
N	0.011		

Name MBH-12X 357 C
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.208	Nb	0.0051
As	0.0147	Nd	
Au		Ni	0.0954
B		O	
Be		P	0.0101
Bi	0.0058	Pb	
C	0.27	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.199	Rh	
Cr	0.094	Ru	
Cu	0.265	S	0.059
Fe		Sb	0.014
Ga		Se	(0.004)
Gd		Si	0.153
Ge		Sn	0.0188
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0569
Ir		Tl	
La		V	0.166
Li		W	0.0194
Mg		Y	
Mn	0.22	Zn	0.0094
Mo	0.0105	Zr	
N	0.0079		

Name MBH-12X 357 D
Description Residuals in Mild Steel
Grade
UNS

Ag		Na	
Al	0.138	Nb	0.011
As	0.0127	Nd	
Au		Ni	0.188
B	0.0036	O	
Be		P	0.0101
Bi	0.0024	Pb	0.04
C	0.312	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.198	Rh	
Cr	0.212	Ru	
Cu	0.203	S	0.066
Fe		Sb	0.018
Ga		Se	0.0057
Gd		Si	0.211
Ge		Sn	0.0145
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.074
Ir		Tl	
La		V	0.127
Li		W	0.0213
Mg		Y	
Mn	0.219	Zn	
Mo	0.0253	Zr	0.0049
N			

Carbon Steel

Name MBH-12X 358 A
Description Residuals in Mild Steel
Grade
UNS

Name IARM-29C ↓
Description Resulfurized Carbon Steel
Grade AISI 1117
UNS G11170

Name IARM-29E
Description Resulfurized Carbon Steel
Grade AISI 1117
UNS G11170

Name IARM-307A
Description Resulfurized Carbon Steel
Grade AISI 1118
UNS G11180

Name IARM-307B
Description Resulfurized Carbon Steel
Grade AISI 1118
UNS G11180

Ag		Na	
Al	0.0616	Nb	0.104
As	0.0393	Nd	
Au		Ni	0.212
B		O	
Be		P	0.0102
Bi	0.0102	Pb	
C	0.129	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0355	Rh	
Cr	0.625	Ru	
Cu	0.25	S	0.0142
Fe		Sb	0.128
Ga		Se	0.097
Gd		Si	0.199
Ge		Sn	0.117
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0453
Ir		Tl	
La		V	0.0261
Li		W	0.123
Mg		Y	
Mn	0.709	Zn	
Mo	0.108	Zr	
N	0.0029		

Ag		Na	
Al	0.003	Nb	(0.003)
As	0.009	Nd	
Au		Ni	0.075
B	(0.003)	O	0.005
Be		P	0.011
Bi		Pb	(<0.001)
C	0.18	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.01)	Rh	
Cr	0.076	Ru	
Cu	0.15	S	0.13
Fe		Sb	
Ga		Se	
Gd		Si	0.28
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.003
Li		W	(0.002)
Mg		Y	
Mn	1.2	Zn	
Mo	0.016	Zr	
N	0.01		

Ag		Na	
Al	0.0032	Nb	0.0024
As	0.0085	Nd	
Au		Ni	0.082
B	0.0007	O	0.005
Be		P	0.0157
Bi	(<0.013)	Pb	0.001
C	0.193	Pd	
Ca	0.0012	Pr	
Cd		Pt	
Ce		Re	
Co	0.008	Rh	
Cr	0.105	Ru	
Cu	0.253	S	0.121
Fe		Sb	0.003
Ga		Se	(0.0006)
Gd		Si	0.239
Ge		Sn	0.0109
H		Sr	
Hf		Ta	(0.0004)
Hg		Te	
In		Ti	0.0014
Ir		Tl	
La		V	0.0255
Li		W	(<0.007)
Mg	(0.0003)	Y	
Mn	1.19	Zn	(0.004)
Mo	0.0269	Zr	(<0.004)
N	0.0093		

Ag		Na	
Al	0.032	Nb	(0.002)
As	0.008	Nd	
Au		Ni	0.197
B	(<0.005)	O	0.003
Be		P	0.0113
Bi	(<0.02)	Pb	0.002
C	0.163	Pd	
Ca	(<0.0005)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.104	Ru	
Cu	0.19	S	0.096
Fe		Sb	(<0.004)
Ga		Se	(<0.006)
Gd		Si	0.281
Ge		Sn	0.009
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.0028
Li		W	(0.005)
Mg	(<0.006)	Y	
Mn	1.44	Zn	(<0.002)
Mo	0.045	Zr	(0.002)
N	0.0108		

Ag		Na	
Al	0.034	Nb	0.0013
As	(0.008)	Nd	
Au		Ni	0.195
B	(0.0005)	O	(0.004)
Be		P	0.012
Bi	(<0.014)	Pb	(0.006)
C	0.162	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.0101	Rh	
Cr	0.105	Ru	
Cu	0.191	S	0.094
Fe		Sb	(<0.006)
Ga		Se	(<0.005)
Gd		Si	0.3
Ge		Sn	0.01
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.003
Li		W	(0.005)
Mg	(<0.005)	Y	
Mn	1.45	Zn	(<0.004)
Mo	0.045	Zr	(0.004)
N	0.011		

Carbon Steel

Name	IARM-348A		
Description	Resulturized Carbon Steel		
Grade	AISI 1141		
UNS	G11410		

Name	IARM-199C		
Description	Resulturized Carbon Steel		
Grade	AISI 1144		
UNS	G11440		

Name	IARM-Fe1020-18		
Description	AISI 1020		
Grade	AISI 1020		
UNS	G10200		

Name	IARM-Fe1050-18		
Description	AISI 1050		
Grade	AISI 1050		
UNS	G10500		

Ag		Na	
Al	0.002	Nb	0.027
As	0.007	Nd	
Au		Ni	0.081
B	0.0013	O	0.003
Be		P	0.0121
Bi	(<0.02)	Pb	(0.002)
C	0.384	Pd	
Ca	0.001	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.123	Ru	
Cu	0.23	S	0.102
Fe		Sb	(0.003)
Ga		Se	(<0.005)
Gd		Si	0.27
Ge		Sn	0.0112
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.0029
Li		W	(0.009)
Mg	(<0.006)	Y	
Mn	1.46	Zn	(<0.003)
Mo	0.026	Zr	(0.003)
N	0.01		

Ag		Na	
Al	0.0019	Nb	0.0016
As	0.0059	Nd	
Au		Ni	0.085
B	(0.003)	O	0.0037
Be		P	0.0155
Bi		Pb	0.001
C	0.469	Pd	
Ca	(0.0011)	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	0.19	Ru	
Cu	0.193	S	0.281
Fe		Sb	(0.003)
Ga		Se	(<0.006)
Gd		Si	0.21
Ge		Sn	0.0084
H		Sr	
Hf		Ta	(0.0007)
Hg		Te	
In		Ti	0.0016
Ir		Tl	
La		V	0.0037
Li		W	0.0023
Mg	(0.0002)	Y	
Mn	1.55	Zn	(0.0006)
Mo	0.0293	Zr	(<0.0040)
N	0.007		

Ag		Na	
Al	0.003	Nb	0.0012
As	0.0044	Nd	
Au		Ni	0.078
B	(0.0006)	O	0.007
Be		P	0.006
Bi	(<0.005)	Pb	(0.0003)
C	0.226	Pd	
Ca	0.002	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.0065	Rh	
Cr	0.125	Ru	
Cu	0.198	S	0.024
Fe	98.5	Sb	0.0018
Ga		Se	(<0.005)
Gd		Si	0.235
Ge		Sn	0.008
H	(0.0002)	Sr	
Hf		Ta	0.003
Hg		Te	
In		Ti	(0.001)
Ir		Tl	
La		V	0.036
Li		W	(0.0007)
Mg	(<0.005)	Y	
Mn	0.547	Zn	0.003
Mo	0.0252	Zr	(0.002)
N	0.0098		

Ag		Na	
Al	0.003	Nb	0.0013
As	0.003	Nd	
Au		Ni	0.068
B	0.0005	O	0.0026
Be		P	0.0045
Bi	(<0.005)	Pb	(0.00015)
C	0.499	Pd	
Ca	(0.002)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.0056	Rh	
Cr	0.1	Ru	
Cu	0.179	S	0.027
Fe	98	Sb	0.0015
Ga		Se	(<0.005)
Gd		Si	0.223
Ge		Sn	0.0103
H	(<0.0001)	Sr	
Hf		Ta	(0.002)
Hg		Te	
In		Ti	0.0008
Ir		Tl	
La		V	0.027
Li		W	(0.0005)
Mg	(<0.005)	Y	
Mn	0.79	Zn	0.003
Mo	0.018	Zr	(0.001)
N	0.0097		

Section 7

Low Alloy Steel

Name REI2-20
Description High Purity Iron SUS
Grade
UNS

Name MBH- 11X AR5 K
Description Abrasion Resistant
Grade
UNS

Name IARM- 340A
Description Alloy Steel
Grade AISI 300M
UNS K44220

Name IARM- 229B ↓
Description Alloy Steel
Grade ASTM A182 Grade F1
UNS K12822

Name IARM- 35B ↓
Description Alloy Steel
Grade ASTM A182 Grade F11 Class 2
UNS K11572

Ag	(<0.1)*	Na	(<0.03)*
Al	(12)*	Nb	(0.3)*
As	(21)*	Nd	(<0.01)*
Au	(<0.1)*	Ni	(42)*
B	(0.3)*	O	(115)*
Be	(<0.005)*	P	(35)*
Bi	(<0.05)*	Pb	(0.1)*
C	(53)*	Pd	(<0.1)*
Ca	(<0.1)*	Pr	(<0.01)*
Cd	(<0.5)*	Pt	(<0.1)*
Ce	(<0.05)*	Re	(<0.01)*
Co	(16)*	Rh	(<0.1)*
Cr	(69)*	Ru	(<0.1)*
Cu	(65)*	S	(33)*
Fe		Sb	(2.8)*
Ga	(4.7)*	Se	(<2)*
Gd	(<0.01)*	Si	(36)*
Ge	(5.6)*	Sn	(3)*
H		Sr	(<5)*
Hf	(<0.01)*	Ta	(<0.01)*
Hg	(<0.1)*	Te	(<0.01)*
In	(<0.1)*	Ti	(0.22)*
Ir	(<0.05)*	Tl	(<0.05)*
La	(<0.01)*	V	(0.8)*
Li	(<0.005)*	W	(0.22)*
Mg	(0.4)*	Y	(<5)*
Mn	(216)*	Zn	(5.7)*
Mo	(10)*	Zr	(<0.05)*
N	(18)*		

Ag		Na	
Al	0.12	Nb	0.027
As		Nd	
Au		Ni	5.15
B		O	
Be		P	0.0405
Bi		Pb	0.0035
C	3.2	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.34	Rh	
Cr	8.83	Ru	
Cu	0.0517	S	0.0215
Fe		Sb	
Ga		Se	
Gd		Si	1.695
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.062
Ir		Tl	
La		V	0.0533
Li		W	0.073
Mg		Y	
Mn	0.535	Zn	
Mo	0.149	Zr	(<0.05)*
N			

Ag		Na	
Al	0.062	Nb	0.015
As	0.004	Nd	
Au		Ni	1.8
B	0.0004	O	(0.001)
Be		P	0.011
Bi		Pb	(0.001)
C	0.414	Pd	
Ca	(0.0004)	Pr	
Cd		Pt	
Ce		Re	
Co	0.006	Rh	
Cr	0.84	Ru	
Cu	0.103	S	0.001
Fe		Sb	0.0021
Ga		Se	
Gd		Si	1.63
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0098
Ir		Tl	
La		V	0.064
Li		W	0.005
Mg	(0.0002)	Y	
Mn	0.755	Zn	(0.0001)
Mo	0.39	Zr	(0.002)
N	0.002		

Ag		Na	
Al	0.025	Nb	0.0019
As	0.002	Nd	
Au		Ni	0.03
B	0.0006	O	0.0017
Be		P	0.0073
Bi	(<0.0005)	Pb	0.0005
C	0.22	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.0116	Rh	
Cr	0.017	Ru	
Cu	0.0153	S	0.0106
Fe		Sb	(0.0006)
Ga		Se	(<0.0012)
Gd		Si	0.329
Ge		Sn	0.0012
H		Sr	
Hf		Ta	(0.003)
Hg		Te	
In		Ti	0.0019
Ir		Tl	
La		V	0.0059
Li		W	0.003
Mg	(<0.001)	Y	
Mn	0.858	Zn	(<0.003)
Mo	0.495	Zr	0.0008
N	0.0072		

Ag		Na	
Al	0.016	Nb	0.003
As	0.006	Nd	
Au		Ni	0.084
B	0.0005	O	0.0016
Be		P	0.006
Bi		Pb	(<0.01)
C	0.13	Pd	
Ca	0.0001	Pr	
Cd		Pt	
Ce		Re	
Co	0.008	Rh	
Cr	1.12	Ru	
Cu	0.11	S	0.015
Fe		Sb	
Ga		Se	
Gd		Si	0.58
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.005
Li		W	(<0.01)
Mg		Y	
Mn	0.45	Zn	
Mo	0.46	Zr	(<0.005)
N	0.0079		

Low Alloy Steel

Name	IARM- 35C ↓
Description	Alloy Steel
Grade	ASTM A182 Grade F11 Class 2
UNS	K11572

Name	IARM- 35L ↓
Description	Alloy Steel
Grade	ASTM A182 Grade F11 Class 2
UNS	K11572

Name	MBH- 12X 21590 A
Description	Alloy Steel
Grade	ASTM A182 Grade F22
UNS	K21590

Name	IARM- 36B ↓
Description	Alloy Steel
Grade	ASTM A182 Grade F22
UNS	K21590

Name	IARM- 36C
Description	Alloy Steel
Grade	ASTM A182 Grade F22
UNS	K21590

Ag		Na	
Al	0.029	Nb	0.002
As	0.008	Nd	
Au		Ni	0.102
B	0.0004	O	0.0016
Be		P	0.012
Bi		Pb	(0.001)
C	0.115	Pd	
Ca	(0.0004)	Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	1.09	Ru	
Cu	0.271	S	0.014
Fe		Sb	(0.005)
Ga		Se	
Gd		Si	0.56
Ge		Sn	0.017
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.005
Li		W	(0.005)
Mg		Y	
Mn	0.44	Zn	
Mo	0.52	Zr	(0.002)
N	0.0093		

Ag		Na	
Al	0.017	Nb	0.0026
As	0.0045	Nd	
Au		Ni	0.071
B	0.00044	O	(<0.005)
Be		P	0.007
Bi	(<0.001)	Pb	(<0.001)
C	0.119	Pd	
Ca	(<0.002)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.007	Rh	
Cr	1.35	Ru	
Cu	0.123	S	0.014
Fe		Sb	(0.003)
Ga		Se	(<0.002)
Gd		Si	0.679
Ge		Sn	0.0088
H		Sr	
Hf		Ta	(<0.002)
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.0037
Li		W	0.004
Mg	(<0.003)	Y	
Mn	0.535	Zn	(<0.002)
Mo	0.607	Zr	(<0.004)
N	0.0072		

Ag		Na	
Al	0.0202	Nb	
As	0.0091	Nd	
Au		Ni	0.144
B		O	
Be		P	0.0128
Bi		Pb	
C	0.139	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	2.1	Ru	
Cu	0.283	S	0.0059
Fe		Sb	
Ga		Se	
Gd		Si	0.211
Ge		Sn	0.019
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0011
Ir		Tl	
La		V	0.0032
Li		W	
Mg		Y	
Mn	0.457	Zn	0.0045
Mo	0.935	Zr	0.0008
N	0.0134		

Ag		Na	
Al	0.03	Nb	0.004
As	0.009	Nd	
Au		Ni	0.18
B	(0.0002)	O	0.0018
Be		P	0.01
Bi		Pb	(0.003)
C	0.14	Pd	
Ca	0.0002	Pr	
Cd		Pt	
Ce		Re	
Co	0.012	Rh	
Cr	2.18	Ru	
Cu	0.13	S	0.0038
Fe		Sb	
Ga		Se	
Gd		Si	0.21
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.006
Li		W	(<0.01)
Mg		Y	
Mn	0.49	Zn	
Mo	0.95	Zr	(<0.005)
N	0.0102		

Ag		Na	
Al	0.017	Nb	(0.004)
As	0.005	Nd	
Au		Ni	0.085
B	(<0.01)	O	(0.004)
Be		P	0.009
Bi	(<0.01)	Pb	(<0.001)
C	0.14	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.008	Rh	
Cr	2.43	Ru	
Cu	0.142	S	0.014
Fe		Sb	(<0.002)
Ga		Se	(<0.002)
Gd		Si	0.25
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.0022)
Ir		Tl	
La		V	0.0061
Li		W	(<0.006)
Mg	(<0.003)	Y	
Mn	0.49	Zn	(<0.004)
Mo	0.98	Zr	(<0.004)
N	0.008		

Low Alloy Steel

Name IARM- 37C
Description Alloy Steel
Grade ASTM A182 Grade F5a
UNS K42544

Name IARM- 38A ↓
Description Alloy Steel
Grade ASTM A182 Grade F9
UNS K90941

Name IARM- 38B ↓
Description Alloy Steel
Grade ASTM A182 Grade F9
UNS K90941

Name IARM- FeT23-18
Description Alloy Steel
Grade ASTM A213 Grade T23
UNS K40712

Name IARM- 321A ↓
Description Alloy Steel
Grade Grade 722
UNS

Ag		Na	
Al	0.01	Nb	0.004
As	0.009	Nd	
Au		Ni	0.148
B	(0.0003)	O	(<0.02)
Be		P	0.014
Bi	(<0.03)	Pb	(<0.002)
C	0.096	Pd	
Ca	(<0.002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.015	Rh	
Cr	4.34	Ru	
Cu	0.121	S	0.004
Fe		Sb	(<0.01)
Ga		Se	(<0.006)
Gd		Si	0.31
Ge		Sn	0.009
H		Sr	
Hf		Ta	(<0.002)
Hg		Te	
In		Ti	0.0025
Ir		Tl	
La		V	0.017
Li		W	0.012
Mg	(<0.001)	Y	
Mn	0.408	Zn	(<0.008)
Mo	0.5	Zr	(0.002)
N	0.008		

Ag		Na	
Al	0.009	Nb	0.008
As	(0.023)	Nd	
Au		Ni	0.24
B	(0.0003)	O	(0.005)
Be		P	0.008
Bi		Pb	
C	0.13	Pd	
Ca	(0.0005)	Pr	
Cd		Pt	
Ce		Re	
Co	0.029	Rh	
Cr	8.67	Ru	
Cu	0.15	S	0.018
Fe		Sb	(0.001)
Ga		Se	
Gd		Si	0.38
Ge		Sn	0.014
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.02
Li		W	(0.023)
Mg		Y	
Mn	0.41	Zn	
Mo	0.96	Zr	(0.003)
N	0.019		

Ag		Na	
Al	0.032	Nb	0.007
As	0.01	Nd	
Au		Ni	0.15
B	0.0004	O	0.003
Be		P	0.023
Bi		Pb	(<0.001)
C	0.13	Pd	
Ca	0.0005	Pr	
Cd		Pt	
Ce		Re	
Co	0.017	Rh	
Cr	8.84	Ru	
Cu	0.119	S	0.013
Fe		Sb	0.01
Ga		Se	
Gd		Si	0.78
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.014
Li		W	(0.01)
Mg		Y	
Mn	0.427	Zn	
Mo	0.94	Zr	0.003
N	0.0192		

Ag		Na	
Al		Nb	0.052
As		Nd	
Au		Ni	0.53
B	0.002	O	0.0044
Be		P	0.012
Bi		Pb	
C	0.068	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.085	Rh	
Cr	2.47	Ru	
Cu	0.046	S	0.006
Fe		Sb	
Ga		Se	
Gd		Si	0.18
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.238
Li		W	1.6
Mg		Y	
Mn	0.82	Zn	
Mo	0.261	Zr	
N	0.003		

Ag		Na	
Al	0.004	Nb	0.0017
As	0.0052	Nd	
Au		Ni	0.47
B	0.0008	O	(0.005)
Be		P	0.012
Bi		Pb	(0.001)
C	0.53	Pd	
Ca	0.0016	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	0.24	Ru	
Cu	0.212	S	0.017
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.65
Ge		Sn	0.019
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0036
Ir		Tl	
La		V	0.089
Li		W	0.005
Mg		Y	
Mn	1.53	Zn	
Mo	0.026	Zr	(0.001)
N	0.01		

Low Alloy Steel

Name IARM- 322A ↓
Description Alloy Steel
Grade Grade 75S
UNS

Name IARM- 342A
Description Alloy Steel
Grade Hy-TUF
UNS K32550

Name IARM- 196A
Description Alloy Steel
Grade SPC 3
UNS

Name IARM- 268B ↓
Description Alloy Steel
Grade STA 361
UNS

Name MBH- 11X C1 R ↓
Description Alloy Steel
Grade
UNS

Ag		Na	
Al	0.002	Nb	
As	0.005	Nd	
Au		Ni	0.28
B	0.0009	O	0.006
Be		P	0.009
Bi		Pb	(0.001)
C	0.317	Pd	
Ca	0.0019	Pr	
Cd		Pt	
Ce		Re	
Co	0.006	Rh	
Cr	0.159	Ru	
Cu	0.33	S	0.021
Fe		Sb	0.0027
Ga		Se	
Gd		Si	0.42
Ge		Sn	0.016
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0016
Ir		Tl	
La		V	0.124
Li		W	0.003
Mg		Y	
Mn	1.4	Zn	
Mo	0.021	Zr	(0.001)
N			

Ag		Na	
Al	0.019	Nb	(0.002)
As	0.006	Nd	
Au		Ni	1.76
B	0.0004	O	0.0006
Be		P	0.006
Bi		Pb	0.0008
C	0.257	Pd	
Ca	(0.0001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.008	Rh	
Cr	0.38	Ru	
Cu	0.11	S	0.0051
Fe		Sb	0.0021
Ga		Se	
Gd		Si	1.63
Ge		Sn	0.021
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0028
Ir		Tl	
La		V	0.023
Li		W	(0.005)
Mg	(0.0002)	Y	
Mn	1.37	Zn	(0.001)
Mo	0.42	Zr	(0.002)
N	0.102		

Ag		Na	
Al	0.015	Nb	0.087
As	0.025	Nd	
Au		Ni	0.61
B	0.0017	O	0.0021
Be		P	0.04
Bi		Pb	0.001
C	1.08	Pd	
Ca	0.0002	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	2.35	Ru	
Cu	0.25	S	0.014
Fe		Sb	0.006
Ga		Se	
Gd		Si	0.35
Ge		Sn	0.033
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.014
Ir		Tl	
La		V	0.157
Li		W	0.189
Mg		Y	
Mn	2.4	Zn	
Mo	0.129	Zr	0.006
N	0.0084		

Ag		Na	
Al	0.002	Nb	0.006
As	(<0.005)	Nd	
Au		Ni	0.127
B	0.0011	O	(0.015)
Be		P	0.011
Bi		Pb	(<0.003)
C	0.087	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.003	Rh	
Cr	0.094	Ru	
Cu	0.31	S	0.035
Fe		Sb	
Ga		Se	
Gd		Si	0.21
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(<0.001)
Ir		Tl	
La		V	0.047
Li		W	0.01
Mg		Y	
Mn	0.58	Zn	
Mo	0.033	Zr	(<0.001)
N	0.0015		

Ag		Na	
Al	0.0195	Nb	0.09
As	0.0141	Nd	
Au		Ni	0.557
B	0.0357	O	
Be		P	0.102
Bi	0.011	Pb	0.005
C	2.91	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0694	Rh	
Cr	0.25	Ru	
Cu	0.132	S	0.057
Fe		Sb	0.046
Ga		Se	0.005
Gd		Si	1.49
Ge		Sn	0.0391
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.112
Ir		Tl	
La		V	0.109
Li		W	0.1
Mg		Y	
Mn	1.35	Zn	0.0097
Mo	0.0278	Zr	0.003
N	0.0091		

Low Alloy Steel

Name MBH- 11X C10 D

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.021	Nb	
As	0.022	Nd	
Au		Ni	0.88
B	0.003	O	
Be		P	0.104
Bi		Pb	0.0027
C	3.4	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.059	Rh	
Cr	0.415	Ru	
Cu	0.645	S	0.083
Fe		Sb	0.038
Ga		Se	
Gd		Si	1.94
Ge		Sn	0.036
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.047
Ir		Tl	
La		V	0.103
Li		W	0.325
Mg		Y	
Mn	0.75	Zn	
Mo	0.29	Zr	
N	0.007		

Name MBH- 11X C2 V

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.104	Nb	0.016
As	0.0541	Nd	
Au		Ni	1.803
B	0.0098	O	
Be		P	0.256
Bi	0.0084	Pb	0.0133
C	3.17	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.116	Rh	
Cr	1.126	Ru	
Cu	0.191	S	0.077
Fe		Sb	0.115
Ga		Se	0.0157
Gd		Si	1.18
Ge		Sn	0.0627
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.087
Ir		Tl	
La		V	0.328
Li		W	0.0228
Mg		Y	
Mn	1.23	Zn	0.0115
Mo	0.116	Zr	
N	0.0096		

Name MBH- 11X C3 AD

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0104	Nb	0.021
As	0.086	Nd	
Au		Ni	4.34
B	0.0253	O	
Be		P	0.539
Bi	0.0124	Pb	0.017
C	3.45	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.24	Rh	
Cr	1.669	Ru	
Cu	0.351	S	0.18
Fe		Sb	0.243
Ga		Se	0.028
Gd		Si	1.06
Ge		Sn	0.166
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.127
Ir		Tl	
La		V	0.605
Li		W	0.04
Mg		Y	
Mn	0.896	Zn	0.007
Mo	0.235	Zr	
N	0.0075		

Name MBH-11X C4 S

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.006	Nb	0.0233
As	0.0235	Nd	
Au		Ni	3.21
B	0.0351	O	
Be		P	0.1014
Bi	0.007	Pb	0.034
C	1.954	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.021	Rh	
Cr	1.382	Ru	
Cu	0.095	S	0.096
Fe		Sb	0.0055
Ga		Se	0.009
Gd		Si	2.98
Ge		Sn	0.014
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.08
Ir		Tl	
La		V	0.0165
Li		W	0.099
Mg		Y	
Mn	0.565	Zn	0.0037
Mo	0.177	Zr	
N	0.0126		

Name MBH-11X C5 Y

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.06	Nb	0.02
As	0.0203	Nd	
Au		Ni	1.186
B	0.0058	O	
Be		P	0.092
Bi	0.005	Pb	0.0108
C	2.78	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0495	Rh	
Cr	0.95	Ru	
Cu	0.542	S	0.092
Fe		Sb	0.03
Ga		Se	0.0072
Gd		Si	1.913
Ge		Sn	0.0357
H		Sr	
Hf		Ta	
Hg		Te	(0.002)
In		Ti	0.0934
Ir		Tl	
La		V	0.0739
Li		W	0.0072
Mg		Y	
Mn	0.754	Zn	0.0107
Mo	0.443	Zr	(0.002)
N	0.0094		

Low Alloy Steel

Name MBH-11X C6 W

Description Alloy Steel

Grade

UNS

Ag	0.0042	Na	
Al	0.0206	Nb	0.0102
As	0.0544	Nd	
Au		Ni	0.0727
B	0.0043	O	
Be		P	0.0877
Bi	0.007	Pb	0.0071
C	3.801	Pd	
Ca		Pr	
Cd	(0.00032)	Pt	
Ce		Re	
Co	0.0469	Rh	
Cr	0.3956	Ru	
Cu	0.9516	S	0.0641
Fe		Sb	0.0584
Ga		Se	0.006
Gd		Si	0.8103
Ge		Sn	0.0307
H		Sr	
Hf		Ta	
Hg		Te	0.0133
In		Ti	0.1946
Ir		Tl	
La		V	0.0456
Li		W	0.0242
Mg		Y	
Mn	0.9674	Zn	0.0045
Mo	1.322	Zr	
N	0.007		

Name MBH-11X C7 P ↓

Description Alloy Steel

Grade

UNS

Ag	(0.026)	Na	
Al	0.029	Nb	0.0195
As	0.011	Nd	
Au		Ni	0.0273
B	0.0099	O	
Be		P	0.0587
Bi		Pb	0.0106
C	3.24	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0068	Rh	
Cr	0.61	Ru	
Cu	0.072	S	0.0081
Fe		Sb	0.009
Ga		Se	
Gd		Si	0.604
Ge		Sn	0.011
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.064
Ir		Tl	
La		V	0.0081
Li		W	0.053
Mg		Y	
Mn	2.214	Zn	0.0152
Mo	0.0401	Zr	
N	0.0153		

Name MBH-11X C8 V

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.086	Nb	0.0217
As	0.0812	Nd	
Au		Ni	0.275
B	0.0366	O	
Be		P	1
Bi	0.014	Pb	0.0052
C	2.6	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.126	Rh	
Cr	0.148	Ru	
Cu	0.31	S	0.204
Fe		Sb	0.069
Ga		Se	0.021
Gd		Si	1.643
Ge		Sn	0.1063
H		Sr	
Hf		Ta	
Hg		Te	0.0049
In		Ti	0.235
Ir		Tl	
La		V	0.064
Li		W	0.0258
Mg		Y	
Mn	0.394	Zn	0.0068
Mo	0.148	Zr	0.0064
N	0.0065		

Name MBH-11X C9 D

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.051	Nb	0.0766
As	0.068	Nd	
Au		Ni	2.79
B	0.0049	O	
Be		P	0.069
Bi		Pb	0.0052
C	3.24	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.1301	Rh	
Cr	1.206	Ru	
Cu	0.581	S	0.026
Fe		Sb	0.149
Ga		Se	
Gd		Si	1.462
Ge		Sn	0.04
H		Sr	
Hf		Ta	
Hg		Te	0.011
In		Ti	(0.062)
Ir		Tl	
La		V	0.359
Li		W	0.304
Mg		Y	
Mn	1.886	Zn	0.009
Mo	0.155	Zr	
N			

Name MBH-12X 11572 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.029	Nb	
As	0.003	Nd	
Au		Ni	0.0977
B		O	
Be		P	0.0069
Bi		Pb	
C	0.111	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.107	Ru	
Cu	0.0576	S	0.0025
Fe		Sb	
Ga		Se	
Gd		Si	0.649
Ge		Sn	0.0049
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.498	Zn	0.0009
Mo	0.499	Zr	
N	0.0058		

Low Alloy Steel

Name MBH-12X 14072 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0039	Nb	
As		Nd	
Au		Ni	0.136
B		O	
Be		P	0.0151
Bi		Pb	
C	0.43	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0098	Rh	
Cr	1.061	Ru	
Cu	0.203	S	0.0061
Fe		Sb	
Ga		Se	
Gd		Si	0.322
Ge		Sn	(0.011)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.301
Li		W	
Mg		Y	
Mn	0.68	Zn	
Mo	0.573	Zr	
N	0.0103		

Name MBH-12X 15217 R

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.081	Nb	0.102
As		Nd	
Au		Ni	0.86
B		O	
Be		P	0.064
Bi		Pb	
C	0.166	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.193	Rh	
Cr	1.011	Ru	
Cu	0.257	S	0.078
Fe		Sb	
Ga		Se	
Gd		Si	1.392
Ge		Sn	0.058
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.607
Li		W	0.1
Mg		Y	
Mn	0.885	Zn	
Mo	0.311	Zr	
N	0.014		

Name MBH-12X 15251 U

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.1085	Nb	0.266
As		Nd	
Au		Ni	0.896
B		O	
Be		P	0.0253
Bi		Pb	
C	1.017	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.228	Rh	
Cr	0.612	Ru	
Cu	0.1194	S	0.0215
Fe		Sb	
Ga		Se	
Gd		Si	2.05
Ge		Sn	0.0108
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.391
Li		W	0.0393
Mg		Y	
Mn	0.91	Zn	
Mo	0.205	Zr	
N	0.0031		

Name MBH-12X 15252 Q ↓

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.074	Nb	0.1
As		Nd	
Au		Ni	2.03
B		O	
Be		P	0.0213
Bi		Pb	
C	0.0478	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.154	Rh	
Cr	0.887	Ru	
Cu	0.154	S	0.058
Fe		Sb	
Ga		Se	
Gd		Si	0.265
Ge		Sn	0.0448
H		Sr	
Hf		Ta	(0.054)
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.33
Li		W	
Mg		Y	
Mn	0.818	Zn	
Mo	0.248	Zr	
N	0.0218		

Name MBH-12X 15253 T

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0242	Nb	0.374
As	0.0216	Nd	
Au		Ni	0.991
B		O	
Be		P	0.09
Bi		Pb	
C	0.222	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.265	Rh	
Cr	2.022	Ru	
Cu	0.266	S	0.0821
Fe		Sb	
Ga		Se	
Gd		Si	0.347
Ge		Sn	0.309
H		Sr	
Hf		Ta	0.007
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.276
Li		W	0.276
Mg		Y	
Mn	1.208	Zn	
Mo	1.039	Zr	
N	0.029		

Low Alloy Steel

Name MBH-12X 15254 AA ↓

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.625	Nb	0.31
As		Nd	
Au		Ni	0.311
B	0.0039	O	
Be		P	0.065
Bi		Pb	
C	0.299	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.498	Rh	
Cr	1.83	Ru	
Cu	0.0853	S	0.046
Fe		Sb	
Ga		Se	
Gd		Si	0.831
Ge		Sn	0.0458
H		Sr	
Hf		Ta	0.003
Hg		Te	
In		Ti	0.285
Ir		Tl	
La		V	0.288
Li		W	0.31
Mg		Y	
Mn	1.151	Zn	
Mo	0.711	Zr	
N			

Name MBH-12X 15255 R

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.155	Nb	0.21
As		Nd	
Au		Ni	0.31
B		O	
Be		P	0.083
Bi		Pb	
C	0.39	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.045	Rh	
Cr	1.45	Ru	
Cu	0.285	S	0.064
Fe		Sb	
Ga		Se	
Gd		Si	1.02
Ge		Sn	0.11
H		Sr	
Hf		Ta	0.035
Hg		Te	
In		Ti	0.052
Ir		Tl	
La		V	0.48
Li		W	0.14
Mg		Y	
Mn	1.08	Zn	
Mo	0.11	Zr	
N	0.006		

Name MBH-12X 15256 Q

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.13	Nb	0.0509
As		Nd	
Au		Ni	5.33
B		O	
Be		P	0.0125
Bi		Pb	
C	0.123	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.493	Rh	
Cr	0.362	Ru	
Cu	0.055	S	0.0163
Fe		Sb	
Ga		Se	
Gd		Si	0.19
Ge		Sn	0.107
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.619
Li		W	0.101
Mg		Y	
Mn	0.492	Zn	
Mo	0.074	Zr	
N	0.0056		

Name MBH-12X 15258 P

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.087	Nb	0.133
As		Nd	
Au		Ni	0.497
B	0.01	O	
Be		P	0.067
Bi		Pb	
C	0.392	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.31	Rh	
Cr	0.631	Ru	
Cu	0.109	S	0.0322
Fe		Sb	
Ga		Se	
Gd		Si	1.014
Ge		Sn	0.0718
H		Sr	
Hf		Ta	(0.002)
Hg		Te	
In		Ti	0.1
Ir		Tl	
La		V	0.378
Li		W	0.125
Mg		Y	
Mn	1.23	Zn	
Mo	0.361	Zr	
N			

Name MBH-12X 15260 W

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.191	Nb	0.254
As	0.055	Nd	
Au		Ni	0.453
B		O	
Be		P	0.0275
Bi		Pb	
C	0.352	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0884	Rh	
Cr	2.98	Ru	
Cu	0.152	S	0.074
Fe		Sb	
Ga		Se	
Gd		Si	0.485
Ge		Sn	0.0094
H		Sr	
Hf		Ta	(0.016)
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.442
Li		W	
Mg		Y	
Mn	2.08	Zn	
Mo	0.098	Zr	
N			

Low Alloy Steel

Name MBH-12X 15261 X

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	1.648	Nb	0.601
As	0.0051	Nd	
Au		Ni	0.0985
B		O	
Be		P	0.09
Bi		Pb	
C	0.546	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.333	Rh	
Cr	0.496	Ru	
Cu	0.308	S	0.0518
Fe		Sb	
Ga		Se	
Gd		Si	1.513
Ge		Sn	0.0172
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.385
Ir		Tl	
La		V	0.122
Li		W	0.269
Mg		Y	
Mn	0.483	Zn	
Mo	1.594	Zr	0.0297
N			

Name MBH-12X 15266 V

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.526	Nb	1.438
As	0.064	Nd	
Au		Ni	1.317
B		O	
Be		P	0.0344
Bi		Pb	
C	0.455	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.286	Rh	
Cr	3.49	Ru	
Cu	0.226	S	0.0258
Fe		Sb	
Ga		Se	
Gd		Si	0.674
Ge		Sn	0.0082
H		Sr	
Hf		Ta	0.116
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.106
Li		W	
Mg		Y	
Mn	1.24	Zn	
Mo	0.298	Zr	
N			

Name MBH-12X 15CDV6 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.019	Nb	
As	0.0041	Nd	
Au		Ni	0.044
B		O	
Be		P	0.0056
Bi		Pb	
C	0.171	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.397	Ru	
Cu	0.0231	S	0.0086
Fe		Sb	
Ga		Se	
Gd		Si	0.152
Ge		Sn	0.0011
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.242
Li		W	
Mg		Y	
Mn	0.839	Zn	
Mo	0.875	Zr	
N	0.0069		

Name MBH-12X 16604 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0111	Nb	
As		Nd	
Au		Ni	1.892
B		O	
Be		P	0.0064
Bi		Pb	
C	0.299	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0366	Rh	
Cr	1.912	Ru	
Cu	0.131	S	0.0018
Fe		Sb	
Ga		Se	
Gd		Si	0.239
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0069
Li		W	
Mg		Y	
Mn	0.444	Zn	
Mo	0.334	Zr	
N	0.0046		

Name MBH-12X 19MNV56 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0101	Nb	
As		Nd	
Au		Ni	0.11
B		O	
Be		P	0.0114
Bi		Pb	
C	0.174	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.1087	Ru	
Cu	0.203	S	0.0245
Fe		Sb	
Ga		Se	
Gd		Si	0.357
Ge		Sn	0.0214
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0939
Li		W	
Mg		Y	
Mn	1.563	Zn	
Mo	0.027	Zr	
N	0.021		

Low Alloy Steel

Name MBH-12X 24065 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	1.035	Nb	
As	0.0074	Nd	
Au		Ni	0.271
B		O	
Be		P	0.0129
Bi		Pb	
C	0.37	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.412	Ru	
Cu	0.216	S	0.0044
Fe		Sb	
Ga		Se	
Gd		Si	0.218
Ge		Sn	0.012
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0028
Ir		Tl	
La		V	0.004
Li		W	
Mg		Y	
Mn	0.502	Zn	0.0033
Mo	0.1716	Zr	
N	0.0076		

Name MBH-12X 32550 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0178	Nb	
As	0.0054	Nd	
Au		Ni	1.75
B		O	
Be		P	0.0061
Bi		Pb	
C	0.257	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.377	Ru	
Cu	0.108	S	0.0054
Fe		Sb	
Ga		Se	
Gd		Si	159
Ge		Sn	0.0206
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0222
Li		W	
Mg		Y	
Mn	1.35	Zn	
Mo	0.417	Zr	
N	0.0101		

Name MBH-12X 40CDV12 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0208	Nb	
As	0.004	Nd	
Au		Ni	0.1062
B		O	
Be		P	0.006
Bi		Pb	
C	0.401	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0197	Rh	
Cr	3.29	Ru	
Cu	0.0978	S	0.0013
Fe		Sb	
Ga		Se	
Gd		Si	0.25
Ge		Sn	0.0049
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.198
Li		W	
Mg		Y	
Mn	0.604	Zn	
Mo	0.946	Zr	
N	0.0155		

Name MBH-12X 41300 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.027	Nb	
As	0.0043	Nd	
Au		Ni	0.084
B		O	
Be		P	0.0082
Bi		Pb	
C	0.319	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.996	Ru	
Cu	0.131	S	0.0156
Fe		Sb	
Ga		Se	
Gd		Si	0.183
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.551	Zn	0.0012
Mo	0.217	Zr	
N	0.0095		

Name MBH-12X 41400 B

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0137	Nb	
As	0.0152	Nd	
Au		Ni	0.156
B		O	
Be		P	0.0095
Bi		Pb	
C	0.452	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.999	Ru	
Cu	0.161	S	0.0417
Fe		Sb	
Ga		Se	
Gd		Si	0.32
Ge		Sn	0.0099
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.764	Zn	
Mo	0.177	Zr	
N	0.0124		

Low Alloy Steel

Name MBH-12X 41450 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.022	Nb	
As	0.0053	Nd	
Au		Ni	0.187
B		O	
Be		P	0.0093
Bi		Pb	
C	0.446	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.194	Ru	
Cu	0.1318	S	0.0032
Fe		Sb	
Ga		Se	
Gd		Si	0.261
Ge		Sn	0.009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0385
Li		W	
Mg		Y	
Mn	1.011	Zn	
Mo	0.34	Zr	
N	0.008		

Name MBH-12X 4330V A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0311	Nb	
As	0.0059	Nd	
Au		Ni	1.99
B		O	
Be		P	0.0062
Bi		Pb	
C	0.327	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.922	Ru	
Cu	0.0954	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.303
Ge		Sn	0.0071
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0507
Li		W	
Mg		Y	
Mn	0.857	Zn	
Mo	0.47	Zr	
N	0.0078		

Name MBH-12X 43400 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.013	Nb	
As	0.0084	Nd	
Au		Ni	1.378
B		O	
Be		P	0.0164
Bi		Pb	
C	0.422	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.181	Ru	
Cu	0.177	S	0.0284
Fe		Sb	
Ga		Se	
Gd		Si	0.259
Ge		Sn	0.007
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.592	Zn	0.0027
Mo	0.223	Zr	
N	0.0089		

Name MBH-12X 44220 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.029	Nb	
As	0.0026	Nd	
Au		Ni	1.89
B		O	
Be		P	0.005
Bi		Pb	
C	0.417	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.846	Ru	
Cu	0.031	S	0.0009
Fe		Sb	
Ga		Se	
Gd		Si	1.662
Ge		Sn	0.0019
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0764
Li		W	
Mg		Y	
Mn	0.874	Zn	
Mo	0.401	Zr	
N	0.003		

Name MBH-12X 46150 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0116	Nb	
As	0.0016	Nd	
Au		Ni	1.59
B		O	
Be		P	0.0162
Bi		Pb	0.0012
C	0.16	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0348	Ru	
Cu	0.0158	S	0.0074
Fe		Sb	
Ga		Se	
Gd		Si	0.24
Ge		Sn	0.0012
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0019
Li		W	
Mg		Y	
Mn	0.471	Zn	0.0067
Mo	0.243	Zr	
N	0.0082		

Low Alloy Steel

Name MBH-12X 52986 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0258	Nb	
As	(0.002)	Nd	
Au		Ni	0.0411
B		O	
Be		P	0.0049
Bi		Pb	
C	1.023	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.418	Ru	
Cu	0.077	S	0.0011
Fe		Sb	
Ga		Se	
Gd		Si	0.246
Ge		Sn	0.0063
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0615
Li		W	
Mg		Y	
Mn	0.372	Zn	
Mo	0.0169	Zr	
N	(0.002)		

Name MBH-12X 605M36 A

Description Alloy Steel

Grade

UNS

Ag		Na	(0.009)
Al	0.0102	Nb	
As	0.373	Nd	
Au	0.0033	Ni	
B		O	
Be		P	
Bi	0.0151	Pb	
C	0.243	Pd	
Ca	0.199	Pr	0.0317
Cd		Pt	
Ce		Re	
Co		Rh	0.283
Cr		Ru	0.0101
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	1.504	Ti	
Ir	0.292	Tl	
La	0.0095	V	
Li		W	
Mg		Y	
Mn		Zn	
Mo	0.146	Zr	
N			

Name MBH-12X 61500 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	(0.007)	Nb	
As	0.0067	Nd	
Au		Ni	0.0976
B		O	
Be		P	0.0104
Bi		Pb	
C	0.53	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.023	Ru	
Cu	0.157	S	0.0102
Fe		Sb	
Ga		Se	
Gd		Si	0.24
Ge		Sn	0.0114
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.11
Li		W	
Mg		Y	
Mn	0.912	Zn	0.0055
Mo	0.0195	Zr	
N			

Name MBH-12X 722M24 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0187	Nb	
As	0.0075	Nd	
Au		Ni	0.208
B		O	
Be		P	0.0135
Bi		Pb	
C	0.236	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	3.094	Ru	
Cu	0.2	S	0.0199
Fe		Sb	
Ga		Se	
Gd		Si	0.262
Ge		Sn	0.0116
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.008
Li		W	
Mg		Y	
Mn	0.51	Zn	0.0028
Mo	0.497	Zr	
N			

Name MBH-12X 826M40 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0404	Nb	
As	0.0056	Nd	
Au		Ni	2.408
B		O	
Be		P	0.0094
Bi		Pb	
C	0.395	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.649	Ru	
Cu	0.1294	S	0.0025
Fe		Sb	
Ga		Se	
Gd		Si	0.248
Ge		Sn	0.0085
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.529	Zn	
Mo	0.51	Zr	
N	0.0089		

Low Alloy Steel

Name MBH-12X 835M30 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.004	Nb	
As	0.0068	Nd	
Au		Ni	4.01
B		O	
Be		P	0.0071
Bi		Pb	
C	0.275	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.119	Ru	
Cu	0.195	S	0.0157
Fe		Sb	
Ga		Se	
Gd		Si	0.198
Ge		Sn	0.0101
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0012
Ir		Tl	
La		V	0.0029
Li		W	
Mg		Y	
Mn	0.457	Zn	
Mo	0.213	Zr	
N	0.0087		

Name MBH-12X 86200 A ↓

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0305	Nb	
As	0.0051	Nd	
Au		Ni	0.598
B		O	
Be		P	0.011
Bi		Pb	
C	0.198	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.602	Ru	
Cu	0.213	S	0.0104
Fe		Sb	
Ga		Se	
Gd		Si	0.299
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0045
Li		W	
Mg		Y	
Mn	0.849	Zn	
Mo	0.224	Zr	
N	0.0091		

Name MBH-12X 93106 A

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0246	Nb	
As	0.005	Nd	
Au		Ni	3.255
B		O	
Be		P	0.0071
Bi		Pb	
C	0.122	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.107	Ru	
Cu	0.199	S	0.0103
Fe		Sb	
Ga		Se	
Gd		Si	0.206
Ge		Sn	0.0094
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.003
Li		W	
Mg		Y	
Mn	0.605	Zn	
Mo	0.0879	Zr	
N	0.0098		

Name MBH-12X LA1 B

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.0104	Nb	
As	0.0213	Nd	
Au		Ni	0.21
B		O	
Be		P	0.009
Bi		Pb	
C	0.104	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0144	Rh	
Cr	1.026	Ru	
Cu	0.0572	S	0.06
Fe		Sb	
Ga		Se	
Gd		Si	0.777
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.448
Li		W	
Mg		Y	
Mn	1.262	Zn	
Mo	0.068	Zr	
N	0.0144		

Name MBH-12X LA2 E ↓

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	1.381	Nb	
As	0.282	Nd	
Au		Ni	0.783
B		O	
Be		P	0.0241
Bi		Pb	
C	0.195	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0306	Rh	
Cr	0.813	Ru	
Cu	0.786	S	0.0263
Fe		Sb	
Ga		Se	
Gd		Si	0.678
Ge		Sn	0.0066
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.099
Li		W	
Mg		Y	
Mn	0.57	Zn	
Mo	0.136	Zr	
N	0.0173		

Low Alloy Steel

Name MBH-12X LA3 C

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.041	Nb	
As	0.031	Nd	
Au		Ni	0.28
B		O	
Be		P	0.0274
Bi		Pb	
C	0.5	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0475	Rh	
Cr	0.375	Ru	
Cu	0.213	S	0.0442
Fe		Sb	
Ga		Se	
Gd		Si	0.163
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.157
Li		W	
Mg		Y	
Mn	1.693	Zn	0.004
Mo	0.303	Zr	0.0197
N	0.0039		

Name MBH-12X LA4 C

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.18	Nb	
As	0.019	Nd	
Au		Ni	0.47
B		O	
Be		P	0.052
Bi		Pb	
C	0.65	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.097	Rh	
Cr	0.53	Ru	
Cu	0.26	S	0.025
Fe		Sb	
Ga		Se	
Gd		Si	0.475
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.37
Li		W	0.09
Mg		Y	
Mn	0.36	Zn	0.006
Mo	0.4	Zr	
N	0.011		

Name MBH-12X LA5 C

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.1	Nb	
As	0.0085	Nd	
Au		Ni	0.484
B		O	
Be		P	0.0577
Bi		Pb	
C	0.783	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.166	Rh	
Cr	0.678	Ru	
Cu	0.158	S	0.0261
Fe		Sb	
Ga		Se	
Gd		Si	0.493
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.579
Li		W	
Mg		Y	
Mn	0.726	Zn	0.0091
Mo	0.305	Zr	
N			

Name MBH-12X LA6 D

Description Alloy Steel

Grade

UNS

Ag		Na	
Al	0.174	Nb	
As		Nd	
Au		Ni	0.0338
B		O	
Be		P	0.0041
Bi		Pb	
C	0.009	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0051	Rh	
Cr	0.099	Ru	
Cu	0.025	S	0.0057
Fe		Sb	
Ga		Se	
Gd		Si	0.075
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0033
Li		W	
Mg		Y	
Mn	0.0867	Zn	0.0067
Mo	0.011	Zr	
N	0.007		

Name IARM-299A

Description Alloy Steel Welding Wire

Grade

UNS

Ag		Na	
Al	0.092	Nb	0.006
As	0.003	Nd	
Au		Ni	0.57
B	0.0003	O	(0.002)
Be		P	0.008
Bi		Pb	(0.001)
C	0.469	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.0054	Rh	
Cr	1.03	Ru	
Cu	0.1	S	0.002
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.22
Ge		Sn	0.0055
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0038
Ir		Tl	
La		V	0.12
Li		W	0.01
Mg		Y	
Mn	0.7	Zn	
Mo	0.99	Zr	(0.001)
N	0.0028		

Low Alloy Steel

Name	IARM-143F
Description	Chromium-Molybdenum Steel
Grade	AISI 4130
UNS	G41300

Name	IARM-30D ↓
Description	Chromium-Molybdenum Steel
Grade	AISI 4140
UNS	G41400

Name	IARM-30H
Description	Chromium-Molybdenum Steel
Grade	AISI 4140
UNS	G41400

Name	IARM-30J ↓
Description	Chromium-Molybdenum Steel
Grade	AISI 4140
UNS	G11180

Name	IARM-FeP92-18
Description	Chromium-Molybdenum-Tungsten-Vanadium Steel
Grade	ASTM A182 Grade F92
UNS	K92460

Ag		Na	
Al	0.026	Nb	0.0015
As	0.0051	Nd	
Au		Ni	0.088
B	(<0.003)	O	0.003
Be		P	0.011
Bi	(<0.02)	Pb	(<0.003)
C	0.308	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.865	Ru	
Cu	0.221	S	0.0177
Fe		Sb	(<0.009)
Ga		Se	(<0.005)
Gd		Si	0.23
Ge		Sn	0.01
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.0012
Ir		Tl	
La		V	0.0046
Li		W	0.003
Mg	(<0.005)	Y	
Mn	0.573	Zn	(<0.005)
Mo	0.163	Zr	(<0.01)
N	0.0098		

Ag		Na	
Al	0.035	Nb	0.002
As	0.008	Nd	
Au		Ni	0.159
B	0.0004	O	0.0014
Be		P	0.013
Bi		Pb	(0.0003)
C	0.391	Pd	
Ca	(0.0006)	Pr	
Cd		Pt	
Ce		Re	
Co	0.013	Rh	
Cr	0.978	Ru	
Cu	0.241	S	0.02
Fe		Sb	
Ga		Se	
Gd		Si	0.24
Ge		Sn	0.017
H		Sr	
Hf		Ta	(0.003)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	(0.004)
Li		W	0.003
Mg	(0.005)	Y	
Mn	0.83	Zn	
Mo	0.22	Zr	
N	0.0097		

Ag		Na	
Al	0.02	Nb	0.003
As	0.0046	Nd	
Au		Ni	0.063
B	0.0007	O	0.0016
Be		P	0.015
Bi	(0.002)	Pb	0.0005
C	0.425	Pd	
Ca	(0.0009)	Pr	
Cd		Pt	
Ce		Re	
Co	0.0071	Rh	
Cr	0.97	Ru	
Cu	0.131	S	0.022
Fe		Sb	0.0013
Ga		Se	(<0.005)
Gd		Si	0.253
Ge		Sn	0.008
H	(<0.0001)	Sr	
Hf		Ta	(0.004)
Hg		Te	
In		Ti	0.0024
Ir		Tl	
La		V	0.004
Li		W	0.007
Mg	(0.001)	Y	
Mn	0.937	Zn	(0.002)
Mo	0.199	Zr	0.002
N	0.0081		

Ag		Na	
Al	0.023	Nb	0.0016
As	0.005	Nd	
Au		Ni	0.187
B	(0.0004)	O	(0.003)
Be		P	0.01
Bi	(<0.02)	Pb	(0.002)
C	0.405	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.0098	Rh	
Cr	0.972	Ru	
Cu	0.173	S	0.036
Fe		Sb	(0.004)
Ga		Se	(<0.005)
Gd		Si	0.256
Ge		Sn	0.0109
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.0013
Ir		Tl	
La		V	0.0045
Li		W	0.005
Mg	(<0.005)	Y	
Mn	0.884	Zn	(<0.002)
Mo	0.205	Zr	(0.003)
N	0.01		

Ag		Na	
Al	0.005	Nb	0.096
As		Nd	
Au		Ni	0.82
B	0.0026	O	0.013
Be		P	0.005
Bi		Pb	
C	0.092	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.036	Rh	
Cr	9.4	Ru	
Cu	0.074	S	0.005
Fe		Sb	
Ga		Se	
Gd		Si	0.2
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.188
Li		W	1.97
Mg		Y	
Mn	0.737	Zn	
Mo	0.52	Zr	
N	0.0036		

Low Alloy Steel

Name IARM-Fe91-18
Description Chromium-Molybdenum-Vanadium Steel
Grade ASTM A182 Grade F91
UNS K90901

Name IARM-Fe5140H-18
Description Chromium-Steel
Grade AISI 5140H
UNS H51400

Name IARM-49E
Description Chromium-Steel
Grade AISI E52100
UNS G52986

Name IARM-34A ↓
Description Chromium-Vanadium Steel
Grade AISI E6150
UNS G61500

Name IARM-34B ↓
Description Chromium-Vanadium Steel
Grade AISI E6150
UNS G61500

Ag		Na	
Al	0.006	Nb	0.07
As		Nd	
Au		Ni	0.187
B		O	0.003
Be		P	0.015
Bi		Pb	
C	0.099	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.013	Rh	
Cr	8.24	Ru	
Cu	0.041	S	0.002
Fe		Sb	
Ga		Se	
Gd		Si	0.27
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0021
Ir		Tl	
La		V	0.198
Li		W	0.003
Mg		Y	
Mn	0.453	Zn	
Mo	0.94	Zr	
N	0.046		

Ag		Na	
Al	0.013	Nb	0.0015
As	0.011	Nd	
Au		Ni	0.266
B		O	
Be		P	0.014
Bi		Pb	
C	0.37	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0081	Rh	
Cr	0.67	Ru	
Cu	0.253	S	0.022
Fe		Sb	
Ga		Se	
Gd		Si	0.187
Ge		Sn	0.0069
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.0024
Li		W	0.003
Mg		Y	
Mn	0.93	Zn	
Mo	0.031	Zr	
N	0.007		

Ag		Na	
Al	0.024	Nb	0.003
As	0.0029	Nd	
Au		Ni	0.043
B	(<0.005)	O	0.002
Be		P	0.006
Bi	(<0.001)	Pb	(<0.001)
C	1.03	Pd	
Ca	(<0.003)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.006	Rh	
Cr	1.43	Ru	
Cu	0.076	S	0.002
Fe		Sb	(0.001)
Ga		Se	(<0.002)
Gd		Si	0.248
Ge		Sn	0.0065
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.0006
Ir		Tl	
La		V	0.066
Li		W	(0.002)
Mg	(<0.0005)	Y	
Mn	0.364	Zn	(0.001)
Mo	0.017	Zr	(0.002)
N	0.003		

Ag		Na	
Al	0.014	Nb	0.003
As	(0.006)	Nd	
Au		Ni	0.14
B	(0.0002)	O	(0.0014)
Be		P	0.01
Bi		Pb	
C	0.51	Pd	
Ca	(0.0002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.009	Rh	
Cr	0.99	Ru	
Cu	0.18	S	0.01
Fe		Sb	
Ga		Se	
Gd		Si	0.22
Ge		Sn	0.009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.17
Li		W	(0.016)
Mg		Y	
Mn	0.78	Zn	
Mo	0.044	Zr	(0.002)
N	0.0076		

Ag		Na	
Al	0.024	Nb	0.002
As	0.006	Nd	
Au		Ni	0.14
B	0.0002	O	0.0018
Be		P	0.021
Bi		Pb	(<0.01)
C	0.48	Pd	
Ca	0.0002	Pr	
Cd		Pt	
Ce		Re	
Co	0.009	Rh	
Cr	0.94	Ru	
Cu	0.21	S	0.021
Fe		Sb	
Ga		Se	
Gd		Si	0.29
Ge		Sn	0.012
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.16
Li		W	(<0.01)
Mg		Y	
Mn	0.81	Zn	
Mo	0.053	Zr	(<0.005)
N	0.0089		

Low Alloy Steel

Name	IARM-34C
Description	Chromium-Vanadium Steel
Grade	AISI E6150
UNS	G61500

Name	IARM-27F
Description	Commercially Pure Iron
Grade	Commercially Pure Iron
UNS	K00095

Name	IARM-27G
Description	Commercially Pure Iron
Grade	Commercially Pure Iron
UNS	K00095

Name	MBH-11X 0331.3 H
Description	Corrosion Resistant
Grade	
UNS	

Name	MBH-11X 20001 J
Description	Corrosion Resistant
Grade	
UNS	

Ag		Na	
Al	0.068	Nb	0.004
As	0.0024	Nd	
Au		Ni	0.085
B	0.0003	O	0.0008
Be		P	0.009
Bi		Pb	(0.0003)
C	0.5	Pd	
Ca	(0.0004)	Pr	
Cd		Pt	
Ce		Re	
Co	0.005	Rh	
Cr	0.914	Ru	
Cu	0.078	S	0.0011
Fe		Sb	(0.001)
Ga		Se	
Gd		Si	0.3
Ge		Sn	0.0058
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0045
Ir		Tl	
La		V	0.206
Li		W	(0.003)
Mg		Y	
Mn	0.739	Zn	
Mo	0.022	Zr	(0.001)
N	0.003		

Ag		Na	
Al	(0.0009)	Nb	(<0.002)
As	(0.0023)	Nd	
Au		Ni	(<0.005)
B	(<0.002)	O	0.079
Be		P	(<0.005)
Bi	(<0.01)	Pb	(<0.005)
C	0.002	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.003)	Pt	
Ce		Re	
Co	0.0025	Rh	
Cr	(<0.005)	Ru	
Cu	(<0.005)	S	0.0011
Fe		Sb	(<0.001)
Ga		Se	(<0.005)
Gd		Si	0.004
Ge		Sn	(<0.002)
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	(<0.002)
Ir		Tl	
La		V	(0.0007)
Li		W	(<0.005)
Mg	(<0.001)	Y	
Mn	(<0.005)	Zn	(<0.002)
Mo	(<0.005)	Zr	(<0.005)
N	(<0.002)		

Ag		Na	
Al	0.0013	Nb	(0.002)
As	0.0016	Nd	
Au		Ni	0.045
B	(0.0002)	O	0.025
Be		P	0.003
Bi	(<0.002)	Pb	(<0.003)
C	0.003	Pd	
Ca	(0.0002)	Pr	
Cd	(<0.003)	Pt	
Ce		Re	
Co	0.0009	Rh	
Cr	0.043	Ru	
Cu	0.04	S	0.0011
Fe		Sb	(<0.01)
Ga		Se	(<0.02)
Gd		Si	0.07
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	(0.0009)
Ir		Tl	
La		V	(0.0007)
Li		W	(<0.002)
Mg	(0.0002)	Y	
Mn	0.003	Zn	(<0.005)
Mo	(0.002)	Zr	(<0.01)
N	(0.0003)		

Ag		Na	
Al	0.0323	Nb	0.071
As		Nd	
Au		Ni	16.51
B		O	
Be		P	0.0459
Bi		Pb	0.0088
C	2.08	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.126	Rh	
Cr	1.53	Ru	
Cu	7.01	S	0.056
Fe		Sb	
Ga		Se	
Gd		Si	1.83
Ge		Sn	0.0098
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.075
Ir		Tl	
La		V	0.0386
Li		W	
Mg		Y	
Mn	0.756	Zn	
Mo	0.0381	Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	21.4
B		O	
Be		P	0.005
Bi		Pb	
C	2.9	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.5	Ru	
Cu	0.01	S	0.143
Fe		Sb	
Ga		Se	
Gd		Si	1.01
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.58	Zn	
Mo		Zr	
N			

Low Alloy Steel

Name MBH-11X 20003 K
Description Corrosion Resistant
Grade
UNS

Name MBH-11X S/1 Cr3 J
Description Corrosion Resistant
Grade
UNS

Name IARM-FeDP1080-18
Description Dual-Phase Steel
Grade Grade DP1080
UNS

Name IARM-FeF9-18
Description F9/9Cr 1 Mo
Grade F9
UNS K90941

Name MBH-14X 11170 A
Description Free Machining & Resulfurised Steel
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	17.8
B		O	
Be		P	0.174
Bi		Pb	
C	2.91	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	2.53	Ru	
Cu	0.52	S	0.007
Fe		Sb	
Ga		Se	
Gd		Si	3.03
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.53	Zn	
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	14.53
B		O	
Be		P	0.072
Bi		Pb	
C	2.91	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.61	Ru	
Cu	9.01	S	0.023
Fe		Sb	
Ga		Se	
Gd		Si	1.07
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.861	Zn	
Mo		Zr	
N			

Ag		Na	
Al	0.002	Nb	0.014
As		Nd	
Au		Ni	0.554
B		O	0.0055
Be		P	0.014
Bi		Pb	
C	0.11	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.069	Rh	
Cr	0.554	Ru	
Cu	0.042	S	0.006
Fe		Sb	
Ga		Se	
Gd		Si	0.11
Ge		Sn	0.0064
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0013
Ir		Tl	
La		V	0.0043
Li		W	0.03
Mg		Y	
Mn	1.88	Zn	
Mo	0.445	Zr	
N	0.009		

Ag		Na	
Al	(0.0206)	Nb	0.078
As	0.006	Nd	
Au		Ni	0.148
B	(0.0006)	O	0.0025
Be		P	0.011
Bi	(<0.001)	Pb	(<0.005)
C	0.104	Pd	
Ca	0.002	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.013	Rh	
Cr	8.72	Ru	
Cu	0.093	S	0.0036
Fe	88.9	Sb	0.0026
Ga		Se	(<0.005)
Gd		Si	0.345
Ge		Sn	0.0062
H	(0.0001)	Sr	
Hf		Ta	(<0.006)
Hg		Te	
In		Ti	0.0028
Ir		Tl	
La		V	0.214
Li		W	0.003
Mg	(<0.001)	Y	
Mn	0.459	Zn	(<0.005)
Mo	0.94	Zr	(<0.005)
N	0.0323		

Ag		Na	
Al	0.0023	Nb	
As	0.0044	Nd	
Au		Ni	0.0877
B		O	
Be		P	0.0133
Bi		Pb	0.0011
C	0.154	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.1126	Ru	
Cu	0.1101	S	0.12
Fe		Sb	
Ga		Se	
Gd		Si	0.151
Ge		Sn	0.011
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.129	Zn	
Mo	0.0317	Zr	
N	0.0112		

Low Alloy Steel

Name MBH-14X 11390 A
Description Free Machining & Resulfurised Steel
Grade
UNS

Ag		Na	
Al	0.0026	Nb	
As	0.0028	Nd	
Au		Ni	0.0239
B		O	
Be		P	0.0342
Bi		Pb	
C	0.419	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0609	Ru	
Cu	0.0395	S	0.191
Fe		Sb	
Ga		Se	
Gd		Si	0.198
Ge		Sn	0.0022
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.04	Zn	
Mo	0.0067	Zr	
N	0.0042		

Name MBH-14X 12130 A
Description Free Machining & Resulfurised Steel
Grade
UNS

Ag		Na	
Al	0.0024	Nb	
As	0.0016	Nd	
Au		Ni	0.0345
B		O	
Be		P	0.061
Bi		Pb	
C	0.0871	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0505	Ru	
Cu	0.0201	S	0.305
Fe		Sb	
Ga		Se	
Gd		Si	0.022
Ge		Sn	0.0054
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.219	Zn	
Mo	0.0102	Zr	
N	0.0097		

Name MBH-14X 12144 A
Description Free Machining & Resulfurised Steel
Grade
UNS

Ag		Na	
Al	0.0034	Nb	
As	0.0022	Nd	
Au		Ni	0.0162
B		O	
Be		P	0.063
Bi		Pb	0.328
C	0.08	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0807	Ru	
Cu	0.0106	S	0.325
Fe		Sb	
Ga		Se	
Gd		Si	0.0093
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.227	Zn	
Mo	0.0089	Zr	
N	0.0066		

Name MBH-14X 606M36T A
Description Free Machining & Resulfurised Steel
Grade
UNS

Ag		Na	
Al	0.0071	Nb	
As	0.0085	Nd	
Au		Ni	0.0931
B		O	
Be		P	0.0159
Bi		Pb	
C	0.378	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.163	Ru	
Cu	0.179	S	0.196
Fe		Sb	
Ga		Se	
Gd		Si	0.167
Ge		Sn	0.0103
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.574	Zn	
Mo	0.272	Zr	
N	0.0096		

Name MBH-14X MSFM1 L
Description Free Machining & Resulfurised Steel
Grade
UNS

Ag		Na	
Al	(0.08)	Nb	
As		Nd	
Au		Ni	0.147
B		O	
Be		P	0.0689
Bi		Pb	
C	0.143	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0509	Rh	
Cr	0.89	Ru	
Cu	0.1073	S	0.414
Fe		Sb	
Ga		Se	
Gd		Si	0.404
Ge		Sn	0.0289
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0154
Li		W	
Mg		Y	
Mn	1.155	Zn	
Mo	0.264	Zr	
N	0.026		

Low Alloy Steel

Name MBH-14X MSFM2 K
Description Free Machining & Resulfurised Steel
Grade
UNS

Name MBH-14X MSFM3 G
Description Free Machining & Resulfurised Steel
Grade
UNS

Name MBH-14X MN2 S
Description High Manganese Steel
Grade
UNS

Name MBH-14X MN3 U
Description High Manganese Steel
Grade
UNS

Name MBH-14X MN5 U
Description High Manganese Steel
Grade
UNS

Ag		Na	
Al	0.123	Nb	
As		Nd	
Au		Ni	0.235
B		O	
Be		P	0.0491
Bi		Pb	
C	0.272	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.104	Rh	
Cr	0.996	Ru	
Cu	0.162	S	0.248
Fe		Sb	
Ga		Se	
Gd		Si	0.353
Ge		Sn	0.0218
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0324
Li		W	
Mg		Y	
Mn	1.568	Zn	
Mo	0.355	Zr	
N	0.028		

Ag		Na	
Al	(0.18)	Nb	
As		Nd	
Au		Ni	0.161
B	0.0043	O	
Be		P	0.0297
Bi		Pb	
C	0.438	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0494	Rh	
Cr	0.454	Ru	
Cu	0.205	S	0.147
Fe		Sb	
Ga		Se	
Gd		Si	0.292
Ge		Sn	0.0378
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0199
Li		W	
Mg		Y	
Mn	1.809	Zn	
Mo	0.39	Zr	
N	0.0206		

Ag		Na	
Al	0.022	Nb	0.23
As		Nd	
Au		Ni	0.73
B		O	
Be		P	0.025
Bi		Pb	
C	0.79	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.36	Ru	
Cu	0.087	S	0.007
Fe		Sb	
Ga		Se	
Gd		Si	2.2
Ge		Sn	0.015
H		Sr	
Hf		Ta	0.004
Hg		Te	
In		Ti	0.019
Ir		Tl	
La		V	0.09
Li		W	
Mg		Y	
Mn	12.4	Zn	
Mo	1.08	Zr	
N	0.037		

Ag		Na	
Al	0.048	Nb	0.41
As		Nd	
Au		Ni	0.39
B		O	
Be		P	0.025
Bi		Pb	
C	1.07	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.59	Ru	
Cu	0.135	S	0.016
Fe		Sb	
Ga		Se	
Gd		Si	1.05
Ge		Sn	0.027
H		Sr	
Hf		Ta	0.01
Hg		Te	
In		Ti	0.102
Ir		Tl	
La		V	0.023
Li		W	
Mg		Y	
Mn	10.2	Zn	
Mo	0.35	Zr	
N	0.026		

Ag		Na	
Al	0.0257	Nb	0.102
As		Nd	
Au		Ni	2.1
B		O	
Be		P	0.0552
Bi		Pb	
C	1.36	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	3.18	Ru	
Cu	0.691	S	0.0273
Fe		Sb	
Ga		Se	
Gd		Si	1.47
Ge		Sn	0.0228
H		Sr	
Hf		Ta	(0.007)
Hg		Te	
In		Ti	0.93
Ir		Tl	
La		V	0.049
Li		W	
Mg		Y	
Mn	8.78	Zn	
Mo	1.93	Zr	
N	0.0231		

Low Alloy Steel

Name MBH-11X HPC3 K
Description High Phosphorous
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.52
B		O	
Be		P	2.52
Bi		Pb	
C	3.24	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.191	Ru	
Cu	0.132	S	0.0786
Fe		Sb	
Ga		Se	
Gd		Si	1.378
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.042
Li		W	
Mg		Y	
Mn	1.009	Zn	
Mo	0.172	Zr	
N			

Name MBH-11X HPC4 Q
Description High Phosphorous
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	2.03
B		O	
Be		P	1.63
Bi		Pb	
C	3.48	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.788	Ru	
Cu	0.078	S	0.102
Fe		Sb	
Ga		Se	
Gd		Si	1.7
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0299
Li		W	
Mg		Y	
Mn	1.193	Zn	
Mo	0.101	Zr	
N			

Name MBH-11X HPC1 H ↓
Description High Phosphorous
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	0.808
Bi		Pb	
C	3.29	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.056	Ru	
Cu		S	0.0035
Fe		Sb	
Ga		Se	
Gd		Si	3.27
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.62	Zn	
Mo	0.06	Zr	
N			

Name MBH-11X HPC2 L
Description High Phosphorous
Grade
UNS

Ag		Na	
Al		Nb	0.0354
As		Nd	
Au		Ni	0.388
B		O	
Be		P	1.51
Bi		Pb	
C	3.18	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.509	Ru	
Cu	0.046	S	0.0418
Fe		Sb	
Ga		Se	
Gd		Si	2.2
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0502
Ir		Tl	
La		V	0.035
Li		W	
Mg		Y	
Mn	1.005	Zn	
Mo	0.0354	Zr	
N			

Name MBH-11X HPC5 A
Description High Phosphorous
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	0.246
Bi		Pb	
C	3.68	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	1.42	Ru	
Cu		S	0.223
Fe		Sb	
Ga		Se	
Gd		Si	1.175
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.028	Zn	
Mo		Zr	
N			

Low Alloy Steel

Name MBH-14X 93603 A
Description Nickel Steel
Grade Invar (ASTM F1684)
UNS K93603

Name IARM-24A ↓
Description Nickel Steel
Grade Invar-36
UNS K93601

Name IARM-24B
Description Nickel Steel
Grade Invar-36
UNS K93601

Name MBH-14X 94100 A
Description Nickel Steel
Grade
UNS K94100

Name MBH-14X FeNi10 A
Description Nickel Steel
Grade
UNS

Ag		Na	
Al	0.0404	Nb	
As		Nd	
Au		Ni	35.79
B		O	
Be		P	0.005
Bi		Pb	
C	0.0101	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0974	Rh	
Cr	0.024	Ru	
Cu	0.046	S	0.0045
Fe		Sb	
Ga		Se	
Gd		Si	0.153
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0011
Ir		Tl	
La		V	
Li		W	
Mg	0.0019	Y	
Mn	0.339	Zn	
Mo	0.0145	Zr	
N	0.0057		

Ag		Na	
Al	(0.002)	Nb	(0.01)
As		Nd	
Au		Ni	36.1
B		O	(0.01)
Be		P	0.01
Bi		Pb	
C	0.055	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.06	Rh	
Cr	0.17	Ru	
Cu	0.08	S	0.001
Fe		Sb	
Ga		Se	(0.17)
Gd		Si	0.27
Ge		Sn	(0.002)
H		Sr	
Hf		Ta	(<0.2)
Hg		Te	
In		Ti	(0.002)
Ir		Tl	
La		V	0.02
Li		W	(0.04)
Mg		Y	
Mn	0.76	Zn	
Mo	0.01	Zr	
N	(0.003)		

Ag		Na	
Al	0.002	Nb	(<0.01)
As	(<0.005)	Nd	
Au		Ni	35.86
B	(0.001)	O	0.003
Be		P	0.009
Bi		Pb	
C	0.053	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.036	Rh	
Cr	0.121	Ru	
Cu	0.052	S	0.001
Fe		Sb	
Ga		Se	0.19
Gd		Si	0.28
Ge		Sn	0.0018
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	(<0.005)
Li		W	(<0.04)
Mg		Y	
Mn	0.82	Zn	
Mo	0.011	Zr	(<0.005)
N	0.0017		

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	41
B		O	
Be		P	0.0051
Bi		Pb	
C	0.0055	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0208	Rh	
Cr	0.0265	Ru	
Cu	0.0628	S	0.0027
Fe		Sb	
Ga		Se	
Gd		Si	0.103
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0011
Ir		Tl	
La		V	
Li		W	
Mg	0.0021	Y	
Mn	0.443	Zn	
Mo	0.0053	Zr	
N	0.0016		

Ag		Na	
Al	0.0251	Nb	
As		Nd	
Au		Ni	10.1
B		O	
Be		P	0.0151
Bi		Pb	
C	0.094	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.07	Ru	
Cu	0.0281	S	0.0275
Fe		Sb	
Ga		Se	
Gd		Si	0.061
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.274	Zn	
Mo		Zr	
N	0.0052		

Low Alloy Steel

Name MBH-14X FeNi35 D

Description Nickel Steel

Grade

UNS

Ag		Na	
Al	(0.004)	Nb	
As		Nd	
Au		Ni	34.17
B		O	
Be		P	0.04
Bi		Pb	
C	0.035	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.4	Rh	
Cr	0.409	Ru	
Cu	0.0363	S	0.146
Fe		Sb	
Ga		Se	
Gd		Si	0.255
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.303	Zn	
Mo		Zr	
N			

Name MBH-14X FeNi45 C

Description Nickel Steel

Grade

UNS

Ag		Na	
Al	0.988	Nb	
As		Nd	
Au		Ni	45.88
B		O	
Be		P	0.0269
Bi		Pb	
C	0.0082	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.572	Rh	
Cr	0.076	Ru	
Cu	0.089	S	0.0015
Fe		Sb	
Ga		Se	
Gd		Si	0.772
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0222	Zn	
Mo		Zr	
N			

Name MBH-14X FeNi50 C

Description Nickel Steel

Grade

UNS

Ag		Na	
Al	0.319	Nb	
As		Nd	
Au		Ni	51.56
B		O	
Be		P	0.0168
Bi		Pb	
C	0.0245	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.416	Rh	
Cr	0.0662	Ru	
Cu	0.089	S	0.16
Fe		Sb	
Ga		Se	
Gd		Si	0.151
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0571	Zn	
Mo		Zr	
N			

Name MBH-14X FeNi6 A

Description Nickel Steel

Grade

UNS

Ag		Na	
Al	0.0247	Nb	
As		Nd	
Au		Ni	6.09
B		O	
Be		P	0.015
Bi		Pb	
C	0.1	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0732	Ru	
Cu	0.0287	S	0.0275
Fe		Sb	
Ga		Se	
Gd		Si	0.075
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.331	Zn	
Mo		Zr	
N	0.0056		

Name MBH-14X FeNi8 A

Description Nickel Steel

Grade

UNS

Ag		Na	
Al	0.03	Nb	
As		Nd	
Au		Ni	8.11
B		O	
Be		P	0.0151
Bi		Pb	
C	0.0974	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.251	Ru	
Cu	0.0304	S	0.0284
Fe		Sb	
Ga		Se	
Gd		Si	0.099
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.333	Zn	
Mo		Zr	
N	0.0062		

Low Alloy Steel

Name IARM-330A
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 4330M
UNS K23080

Name IARM-330B
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 4330M
UNS K23080

Name IARM-31A ↓
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 4340
UNS G43400

Name IARM-31G
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 4340
UNS G43400

Name IARM-Fe8620-18
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 8620
UNS G86200

Ag		Na	
Al	0.045	Nb	0.003
As	0.003	Nd	
Au		Ni	1.8
B	0.0003	O	0.0009
Be		P	0.005
Bi		Pb	(0.0004)
C	0.299	Pd	
Ca	0.001	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.9	Ru	
Cu	0.074	S	0.001
Fe		Sb	(0.001)
Ga		Se	
Gd		Si	0.273
Ge		Sn	0.0039
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.006
Ir		Tl	
La		V	0.071
Li		W	(0.004)
Mg		Y	
Mn	1	Zn	
Mo	0.404	Zr	0.0015
N	0.0024		

Ag		Na	
Al	0.023	Nb	0.002
As	(<0.1)	Nd	
Au		Ni	1.856
B	(0.001)	O	(0.004)
Be		P	0.0075
Bi	(<0.001)	Pb	(<0.01)
C	0.302	Pd	
Ca	(0.0011)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.013	Rh	
Cr	0.807	Ru	
Cu	0.084	S	0.003
Fe		Sb	(<0.01)
Ga		Se	(<0.001)
Gd		Si	0.277
Ge		Sn	0.0047
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.001)
Ir		Tl	
La		V	0.076
Li		W	0.024
Mg	(<0.001)	Y	
Mn	0.82	Zn	(<0.001)
Mo	0.406	Zr	(0.0013)
N	(0.0043)		

Ag		Na	
Al	0.036	Nb	0.003
As	(0.006)	Nd	
Au		Ni	1.66
B	(0.002)	O	(0.0015)
Be		P	0.012
Bi		Pb	
C	0.41	Pd	
Ca	(0.0012)	Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	0.85	Ru	
Cu	0.19	S	0.028
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.22
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.004
Li		W	
Mg		Y	
Mn	0.75	Zn	
Mo	0.22	Zr	(0.003)
N	0.0114		

Ag		Na	
Al	0.0214	Nb	0.0023
As	0.004	Nd	
Au		Ni	1.814
B	0.0004	O	(0.002)
Be		P	0.0136
Bi	(<0.02)	Pb	(<0.007)
C	0.4	Pd	
Ca	(<0.0009)	Pr	
Cd	(0.001)	Pt	
Ce		Re	
Co	0.0083	Rh	
Cr	0.82	Ru	
Cu	0.183	S	0.013
Fe		Sb	(<0.002)
Ga		Se	
Gd		Si	0.262
Ge		Sn	0.0077
H		Sr	
Hf		Ta	(<0.02)
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.0036
Li		W	0.004
Mg		Y	
Mn	0.689	Zn	(<0.003)
Mo	0.223	Zr	0.0012
N	0.0069		

Ag		Na	
Al	0.0246	Nb	0.0014
As	0.009	Nd	
Au		Ni	0.446
B		O	
Be		P	0.012
Bi		Pb	
C	0.211	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0085	Rh	
Cr	0.536	Ru	
Cu	0.197	S	0.026
Fe		Sb	
Ga		Se	
Gd		Si	0.23
Ge		Sn	0.009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.0061
Li		W	0.004
Mg		Y	
Mn	0.857	Zn	
Mo	0.199	Zr	
N	0.007		

Low Alloy Steel

Name IARM-Fe86L20-18
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 86L20
UNS G86200

Name IARM-252C ↓
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 8740
UNS G87400

Name IARM-252D ↓
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 8740
UNS G87400

Name IARM-252E
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 8740
UNS G87400

Name IARM-252F
Description Nickel-Chromium-Molybdenum Steel
Grade AISI 8740
UNS G87400

Ag		Na	
Al	0.025	Nb	(0.002)
As	(0.007)	Nd	
Au		Ni	0.458
B	(<0.001)	O	(0.0018)
Be		P	0.009
Bi		Pb	0.2
C	0.175	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0085	Rh	
Cr	0.53	Ru	
Cu	0.242	S	0.015
Fe	(97.1)	Sb	(<0.005)
Ga		Se	
Gd		Si	0.29
Ge		Sn	0.014
H	(0.0002)	Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	0.0016
Li		W	(0.004)
Mg		Y	
Mn	0.794	Zn	
Mo	0.203	Zr	(0.001)
N	0.0052		

Ag		Na	
Al	0.017	Nb	0.002
As	0.004	Nd	
Au		Ni	0.505
B	(0.0001)	O	(0.002)
Be		P	0.025
Bi		Pb	0.001
C	0.416	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.008	Rh	
Cr	0.501	Ru	
Cu	0.109	S	0.008
Fe		Sb	(<0.005)
Ga		Se	
Gd		Si	0.248
Ge		Sn	0.007
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.001
Ir		Tl	
La		V	0.005
Li		W	(<0.005)
Mg		Y	
Mn	0.92	Zn	
Mo	0.205	Zr	(<0.002)
N	0.0083		

Ag		Na	
Al	0.024	Nb	0.0013
As	0.0053	Nd	
Au		Ni	0.424
B	0.0002	O	0.0013
Be		P	0.0075
Bi	(0.0005)	Pb	0.0004
C	0.423	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.0078	Rh	
Cr	0.468	Ru	
Cu	0.27	S	0.0128
Fe		Sb	0.0024
Ga		Se	(<0.003)
Gd		Si	0.256
Ge		Sn	0.012
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.0012
Ir		Tl	
La		V	0.0022
Li		W	0.004
Mg	(0.0002)	Y	
Mn	0.842	Zn	0.0005
Mo	0.204	Zr	0.0013
N	0.0068		

Ag		Na	
Al	0.028	Nb	(0.003)
As	0.0046	Nd	
Au		Ni	0.407
B	(0.001)	O	(0.003)
Be		P	0.009
Bi	(<0.02)	Pb	(0.005)
C	0.413	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.0093	Rh	
Cr	0.486	Ru	
Cu	0.164	S	0.012
Fe		Sb	(0.003)
Ga		Se	(<0.005)
Gd		Si	0.257
Ge		Sn	0.0075
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.001
Ir		Tl	
La		V	0.0028
Li		W	(0.006)
Mg	(<0.005)	Y	
Mn	0.87	Zn	(<0.002)
Mo	0.204	Zr	(<0.003)
N	0.0064		

Ag		Na	
Al	0.026	Nb	0.0016
As	0.006	Nd	
Au		Ni	0.412
B	(0.001)	O	(0.003)
Be		P	0.011
Bi	(<0.02)	Pb	(0.003)
C	0.406	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.0086	Rh	
Cr	0.463	Ru	
Cu	0.182	S	0.009
Fe		Sb	(0.003)
Ga		Se	(<0.005)
Gd		Si	0.247
Ge		Sn	0.008
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.001
Ir		Tl	
La		V	0.003
Li		W	0.003
Mg	(<0.005)	Y	
Mn	0.88	Zn	(<0.002)
Mo	0.21	Zr	(0.003)
N	0.0059		

Low Alloy Steel

Name IARM-FeE9310-18
Description Nickel-Chromium-Molybdenum Steel
Grade AISI E9310
UNS G93106

Name IARM-33B ↓
Description Nickel-Molybdenum Steel
Grade AISI 4620
UNS G46200

Name IARM-33C ↓
Description Nickel-Molybdenum Steel
Grade AISI 4620
UNS G46200

Name IARM-33D
Description Nickel-Molybdenum Steel
Grade AISI 4620
UNS G46200

Name IARM-155B ↓
Description Nickel-Molybdenum Steel
Grade AISI 4820
UNS G48200

Ag		Na	
Al	0.036	Nb	(0.002)
As	(0.004)	Nd	
Au		Ni	3.07
B	(<0.005)	O	0.0017
Be		P	0.009
Bi	(<0.005)	Pb	(0.0001)
C	0.121	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.009	Rh	
Cr	1.09	Ru	
Cu	0.158	S	0.0128
Fe	94.6	Sb	(0.002)
Ga		Se	(<0.005)
Gd		Si	0.256
Ge		Sn	0.0072
H	(<0.001)	Sr	
Hf	(<0.001)	Ta	(<0.005)
Hg		Te	
In		Ti	(0.001)
Ir		Tl	
La	(<0.001)	V	0.003
Li		W	(0.003)
Mg	(<0.02)	Y	(<0.001)
Mn	0.62	Zn	(0.001)
Mo	0.086	Zr	(0.002)
N	0.007		

Ag		Na	
Al	0.022	Nb	0.003
As	0.005	Nd	
Au		Ni	1.68
B	0.0002	O	0.002
Be		P	0.01
Bi		Pb	(<0.01)
C	0.19	Pd	
Ca	0.0002	Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.17	Ru	
Cu	0.15	S	0.014
Fe		Sb	
Ga		Se	
Gd		Si	0.22
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.002
Li		W	(<0.01)
Mg		Y	
Mn	0.54	Zn	
Mo	0.22	Zr	(<0.005)
N	0.007		

Ag		Na	
Al	0.025	Nb	0.002
As	(0.005)	Nd	
Au		Ni	1.71
B	(0.0002)	O	0.0021
Be		P	0.009
Bi		Pb	(<0.002)
C	0.184	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.008	Rh	
Cr	0.133	Ru	
Cu	0.223	S	0.017
Fe		Sb	
Ga		Se	
Gd		Si	0.25
Ge		Sn	0.009
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0014
Ir		Tl	
La		V	0.0021
Li		W	0.0026
Mg		Y	
Mn	0.562	Zn	
Mo	0.236	Zr	
N	0.0078		

Ag		Na	
Al	0.026	Nb	0.002
As	0.0035	Nd	
Au		Ni	1.78
B	0.0002	O	0.0013
Be		P	0.009
Bi		Pb	(<0.001)
C	0.209	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.008	Rh	
Cr	0.139	Ru	
Cu	0.072	S	0.023
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.207
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.002
Li		W	(<0.005)
Mg		Y	
Mn	0.593	Zn	
Mo	0.229	Zr	(<0.002)
N	0.0053		

Ag		Na	
Al	0.027	Nb	0.0024
As	0.0038	Nd	
Au		Ni	3.57
B	0.0002	O	0.0017
Be		P	0.009
Bi		Pb	0.0005
C	0.207	Pd	
Ca	0.0026	Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	0.149	Ru	
Cu	0.152	S	0.028
Fe		Sb	(0.001)
Ga		Se	
Gd		Si	0.313
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.003
Li		W	(0.01)
Mg		Y	
Mn	0.635	Zn	
Mo	0.239	Zr	0.002
N	0.008		

Low Alloy Steel

Name	IARM-155F
Description	Nickel-Molybdenum Steel
Grade	AISI 4820
UNS	G48200

Name	IARM-Fe4820-18
Description	Nickel-Molybdenum Steel
Grade	AISI 4820
UNS	G48200

Name	IARM-305B
Description	Nitriding Steel
Grade	Nitralloy 135 Modified
UNS	K24065

Name	IARM-378A
Description	Reinforcing Steel
Grade	ASTM A615 Grade 75
UNS	

Name	IARM-323A ↓
Description	Reinforcing Steel
Grade	ASTM A706 Grade 60
UNS	

Ag		Na	
Al	0.0356	Nb	0.0016
As	0.0006	Nd	
Au		Ni	3.36
B	(0.0004)	O	0.003
Be		P	0.008
Bi		Pb	(<0.006)
C	0.199	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.012	Rh	
Cr	0.144	Ru	
Cu	0.219	S	0.013
Fe		Sb	(<0.003)
Ga		Se	
Gd		Si	0.223
Ge		Sn	0.0084
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.0015
Li		W	0.004
Mg	(<0.001)	Y	
Mn	0.617	Zn	(<0.001)
Mo	0.244	Zr	(<0.002)
N	0.005		

Ag		Na	
Al	0.022	Nb	0.002
As	0.006	Nd	
Au		Ni	3.51
B		O	0.003
Be		P	0.011
Bi		Pb	
C	0.192	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0107	Rh	
Cr	0.144	Ru	
Cu	0.167	S	0.018
Fe		Sb	
Ga		Se	
Gd		Si	0.26
Ge		Sn	0.0089
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0011
Ir		Tl	
La		V	0.0015
Li		W	0.004
Mg		Y	
Mn	0.541	Zn	
Mo	0.287	Zr	
N	0.007		

Ag		Na	
Al	0.92	Nb	0.002
As	0.006	Nd	
Au		Ni	0.156
B	0.0006	O	0.0006
Be		P	0.011
Bi	(<0.002)	Pb	(0.0003)
C	0.425	Pd	
Ca	0.0007	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	1.63	Ru	
Cu	0.214	S	0.014
Fe		Sb	0.004
Ga		Se	
Gd		Si	0.349
Ge		Sn	0.011
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.0044
Ir		Tl	
La		V	0.004
Li		W	0.004
Mg	(0.002)	Y	
Mn	0.58	Zn	(0.002)
Mo	0.32	Zr	0.0011
N	0.0044		

Ag		Na	
Al	0.0029	Nb	0.003
As	(0.0055)	Nd	
Au		Ni	0.142
B	0.0006	O	(<0.014)
Be		P	0.018
Bi	(<0.015)	Pb	(0.003)
C	0.274	Pd	
Ca	(<0.002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.013	Rh	
Cr	0.187	Ru)
Cu	0.299	S	0.037
Fe		Sb	(0.004)
Ga		Se	
Gd		Si	0.307
Ge		Sn	0.0236
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.0844
Li		W	0.006
Mg	(<0.005)	Y	
Mn	1.38	Zn	(0.002)
Mo	0.031	Zr	(0.003)
N	0.02		

Ag		Na	
Al	0.003	Nb	0.0012
As	0.006	Nd	
Au		Ni	0.084
B	0.0003	O	0.01
Be		P	0.0178
Bi	(0.0001)	Pb	(0.001)
C	0.41	Pd	
Ca	0.0008	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	0.15	Ru	
Cu	0.3	S	0.061
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.19
Ge		Sn	0.011
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	0.0012
Ir		Tl	
La		V	0.02
Li		W	0.004
Mg	(0.0004)	Y	
Mn	1.14	Zn	
Mo	0.023	Zr	(0.001)
N	0.0105		

Low Alloy Steel

Name IARM-380A
Description Reinforcing Steel
Grade ASTM A706 Grade 60
UNS

Name IARM-380B
Description Reinforcing Steel
Grade ASTM A706 Grade 60
UNS

Name IARM-381A
Description Reinforcing Steel
Grade ASTM A706 Grade 80
UNS

Name IARM-164A ↓
Description SCLA
Grade CLAI
UNS

Name IARM-173A ↓
Description SCLA
Grade CLAI0
UNS

Ag		Na	
Al	0.0029	Nb	0.002
As	0.007	Nd	
Au		Ni	0.114
B	(0.0005)	O	(0.007)
Be		P	0.021
Bi		Pb	(<0.005)
C	0.268	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.192	Ru	
Cu	0.265	S	0.025
Fe		Sb	(0.0038)
Ga		Se	
Gd		Si	0.181
Ge		Sn	0.0117
H		Sr	
Hf		Ta	(0.001)
Hg		Te	
In		Ti	(0.003)
Ir		Tl	
La		V	0.0475
Li		W	0.009
Mg	(<0.001)	Y	
Mn	1.24	Zn	(0.002)
Mo	0.059	Zr	(0.0014)
N	0.012		

Ag		Na	
Al	0.0021	Nb	0.0016
As	0.0058	Nd	
Au		Ni	0.182
B	(0.0005)	O	(<0.014)
Be		P	0.016
Bi	(<0.001)	Pb	(0.002)
C	0.243	Pd	
Ca	(0.0004)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.014	Rh	
Cr	0.153	Ru	
Cu	0.307	S	0.027
Fe		Sb	(0.003)
Ga		Se	(<0.001)
Gd		Si	0.238
Ge		Sn	0.0132
H		Sr	
Hf		Ta	(<0.001)
Hg		Te	
In		Ti	0.0011
Ir		Tl	
La		V	0.049
Li		W	0.003
Mg	(<0.001)	Y	
Mn	1.27	Zn	(<0.004)
Mo	0.055	Zr	(<0.002)
N	0.013		

Ag		Na	
Al	0.0023	Nb	0.0018
As	0.0055	Nd	
Au		Ni	0.185
B	(0.0007)	O	(0.005)
Be		P	0.013
Bi	(<0.001)	Pb	(<0.007)
C	0.272	Pd	
Ca	(0.0004)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.011	Rh	
Cr	0.129	Ru	
Cu	0.379	S	0.043
Fe		Sb	(0.005)
Ga		Se	(<0.001)
Gd		Si	0.269
Ge		Sn	0.0137
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.0299
Li		W	0.003
Mg	(<0.001)	Y	
Mn	1.16	Zn	(<0.003)
Mo	0.0341	Zr	(<0.002)
N	0.014		

Ag		Na	
Al	0.72	Nb	0.006
As	(0.002)	Nd	
Au		Ni	1.29
B	(0.0001)	O	0.0005
Be		P	0.004
Bi		Pb	(0.004)
C	0.004	Pd	
Ca	0.0002	Pr	
Cd		Pt	
Ce		Re	
Co	0.006	Rh	
Cr	0.032	Ru	
Cu	0.88	S	0.07
Fe		Sb	
Ga		Se	
Gd		Si	0.019
Ge		Sn	0.002
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.78
Li		W	1.44
Mg		Y	
Mn	1.57	Zn	
Mo	0.009	Zr	(<0.005)
N	0.0003		

Ag		Na	
Al	0.48	Nb	0.006
As	(<0.01)	Nd	
Au		Ni	0.024
B	0.0004	O	0.0007
Be		P	0.015
Bi		Pb	(<0.01)
C	0.85	Pd	
Ca	0.0002	Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	4.39	Ru	
Cu	0.72	S	0.004
Fe		Sb	
Ga		Se	
Gd		Si	1.7
Ge		Sn	0.003
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.28
Li		W	0.041
Mg		Y	
Mn	0.011	Zn	
Mo	0.015	Zr	(<0.002)
N	0.0006		

Low Alloy Steel

Name IARM-180A ↓
Description SCLA
Grade CLA11
UNS

Ag		Na	
Al	0.76	Nb	(0.005)
As	(0.004)	Nd	
Au		Ni	1.29
B	0.0004	O	0.0006
Be		P	0.004
Bi		Pb	(0.002)
C	0.007	Pd	
Ca	0.0001	Pr	
Cd		Pt	
Ce		Re	
Co	0.004	Rh	
Cr	0.037	Ru	
Cu	0.89	S	0.046
Fe		Sb	
Ga		Se	
Gd		Si	0.023
Ge		Sn	0.002
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.76
Li		W	1.48
Mg		Y	
Mn	0.41	Zn	
Mo	0.006	Zr	0.003
N	0.0096		

Name IARM-165A ↓
Description SCLA
Grade CLA2
UNS

Ag		Na	
Al	0.8	Nb	0.007
As	(0.003)	Nd	
Au		Ni	1.43
B	(0.001)	O	0.0004
Be		P	0.005
Bi		Pb	(<0.01)
C	0.003	Pd	
Ca	(0.0002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.006	Rh	
Cr	0.036	Ru	
Cu	1.4	S	0.086
Fe		Sb	
Ga		Se	
Gd		Si	0.021
Ge		Sn	0.002
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	1.13
Li		W	1.57
Mg		Y	
Mn	1.65	Zn	
Mo	0.009	Zr	(<0.005)
N	0.0004		

Name IARM-166A ↓
Description SCLA
Grade CLA3
UNS

Ag		Na	
Al	0.55	Nb	0.006
As	(0.004)	Nd	
Au		Ni	0.77
B	(0.0002)	O	0.0006
Be		P	0.005
Bi		Pb	(<0.01)
C	0.003	Pd	
Ca	0.0003	Pr	
Cd		Pt	
Ce		Re	
Co	0.004	Rh	
Cr	0.014	Ru	
Cu	0.64	S	0.073
Fe		Sb	
Ga		Se	
Gd		Si	0.91
Ge		Sn	(0.003)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.4
Li		W	1.02
Mg		Y	
Mn	1.29	Zn	
Mo	1.08	Zr	(<0.01)
N	0.0002		

Name IARM-167A ↓
Description SCLA
Grade CLA4
UNS

Ag		Na	
Al	0.64	Nb	
As	(0.004)	Nd	
Au		Ni	1
B	(0.0002)	O	
Be		P	0.019
Bi		Pb	(0.002)
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.003	Rh	
Cr	0.016	Ru	
Cu	0.95	S	0.087
Fe		Sb	
Ga		Se	
Gd		Si	1.08
Ge		Sn	0.003
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.59
Li		W	1.19
Mg		Y	
Mn	1.36	Zn	
Mo	1.25	Zr	
N			

Name IARM-168A ↓
Description SCLA
Grade CLAS
UNS

Ag		Na	
Al	0.19	Nb	0.003
As	(0.003)	Nd	
Au		Ni	2.32
B	0.0004	O	0.0008
Be		P	0.03
Bi		Pb	(<0.01)
C	0.003	Pd	
Ca	0.0002	Pr	
Cd		Pt	
Ce		Re	
Co	0.003	Rh	
Cr	0.004	Ru	
Cu	0.009	S	0.064
Fe		Sb	
Ga		Se	
Gd		Si	0.46
Ge		Sn	0.003
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.004
Li		W	0.52
Mg		Y	
Mn	0.12	Zn	
Mo	0.69	Zr	(0.003)
N	0.0002		

Low Alloy Steel

Name IARM-169A ↓
Description SCLA
Grade CLA6
UNS

Name IARM-169B
Description SCLA
Grade CLA6
UNS

Name IARM-170A ↓
Description SCLA
Grade CLA7
UNS

Name IARM-170B
Description SCLA
Grade CLA7
UNS

Name IARM-171A ↓
Description SCLA
Grade CLA8
UNS

Ag		Na	
Al	0.3	Nb	0.005
As	(0.009)	Nd	
Au		Ni	2.5
B		O	0.0006
Be		P	0.033
Bi	(0.001)	Pb	(0.002)
C	0.31	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.005	Rh	
Cr	2.19	Ru	
Cu	0.31	S	0.065
Fe		Sb	
Ga		Se	
Gd		Si	0.79
Ge		Sn	0.003
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	0.006
Li		W	0.65
Mg		Y	
Mn	0.21	Zn	
Mo	0.95	Zr	(<0.005)
N	0.0004		

Ag		Na	
Al	0.36	Nb	0.004
As	(0.002)	Nd	
Au		Ni	0.01
B	0.0003	O	(0.004)
Be		P	0.004
Bi	(<0.011)	Pb	(0.001)
C	0.232	Pd	
Ca	(<0.006)	Pr	
Cd		Pt	
Ce		Re	
Co	0.003	Rh	
Cr	0.01	Ru	
Cu	0.005	S	0.004
Fe		Sb	(0.0009)
Ga		Se	(0.005)
Gd		Si	0.32
Ge		Sn	0.002
H		Sr	
Hf		Ta	(0.008)
Hg		Te	
In		Ti	0.23
Ir		Tl	
La		V	0.002
Li		W	0.003
Mg	(<0.005)	Y	
Mn	0.75	Zn	(<0.001)
Mo	0.004	Zr	(0.004)
N	(0.004)		

Ag		Na	
Al	0.032	Nb	0.004
As	(0.005)	Nd	
Au		Ni	1.51
B	(0.0002)	O	0.0003
Be		P	0.039
Bi		Pb	(<0.01)
C	0.56	Pd	
Ca	(0.0001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.004	Rh	
Cr	2.55	Ru	
Cu	0.005	S	0.025
Fe		Sb	
Ga		Se	
Gd		Si	0.01
Ge		Sn	0.002
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.006
Ir		Tl	
La		V	0.006
Li		W	(0.018)
Mg		Y	
Mn	0.019	Zn	
Mo	1.57	Zr	(0.003)
N	0.0003		

Ag		Na	
Al	0.23	Nb	0.004
As	(0.005)	Nd	
Au		Ni	0.197
B	0.0004	O	(<0.006)
Be		P	0.005
Bi	(<0.01)	Pb	(<0.002)
C	0.4	Pd	
Ca	(<0.004)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.005	Rh	
Cr	0.009	Ru	
Cu	0.005	S	0.004
Fe		Sb	(0.0007)
Ga		Se	(<0.005)
Gd		Si	0.21
Ge		Sn	0.002
H		Sr	
Hf		Ta	(0.008)
Hg		Te	
In		Ti	0.19
Ir		Tl	
La		V	0.002
Li		W	(0.002)
Mg	(<0.005)	Y	
Mn	0.821	Zn	(<0.002)
Mo	0.003	Zr	0.005
N	(0.005)		

Ag		Na	
Al	0.082	Nb	0.005
As	(<0.01)	Nd	
Au		Ni	1.95
B	(0.0006)	O	(0.0004)
Be		P	0.043
Bi		Pb	(<0.01)
C	0.64	Pd	
Ca	(0.0001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.005	Rh	
Cr	2.88	Ru	
Cu	0.49	S	0.059
Fe		Sb	
Ga		Se	
Gd		Si	0.25
Ge		Sn	0.002
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	0.006
Li		W	0.13
Mg		Y	
Mn	0.02	Zn	
Mo	1.91	Zr	(0.003)
N	0.0003		

Low Alloy Steel

Name IARM-172A ↓
Description SCLA
Grade CLA9
UNS

Ag		Na	
Al	0.39	Nb	0.004
As	(0.005)	Nd	
Au		Ni	0.025
B	0.0003	O	0.0006
Be		P	0.007
Bi		Pb	(<0.01)
C	0.78	Pd	
Ca	0.0001	Pr	
Cd		Pt	
Ce		Re	
Co	0.006	Rh	
Cr	3.52	Ru	
Cu	0.4	S	0.004
Fe		Sb	
Ga		Se	
Gd		Si	1.29
Ge		Sn	0.003
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.003
Li		W	0.038
Mg		Y	
Mn	0.01	Zn	
Mo	0.014	Zr	(<0.005)
N	0.0004		

Name MBH-11X SG2 A ↓
Description Spheroidal Graphite
Grade
UNS

Ag		Na	
Al	0.0238	Nb	
As	0.0022	Nd	
Au		Ni	0.0263
B		O	
Be		P	0.0353
Bi		Pb	
C	3.48	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.0304	Ru	
Cu	0.0245	S	0.0075
Fe		Sb	
Ga		Se	
Gd		Si	3.03
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0146
Ir		Tl	
La		V	
Li		W	
Mg	0.055	Y	
Mn	0.297	Zn	0.04
Mo		Zr	
N			

Name IARM-341A
Description Superstrength Alloy Steel
Grade HP9-4-30
UNS K91283

Ag		Na	
Al	0.032	Nb	0.005
As	0.003	Nd	
Au		Ni	7.16
B	0.0005	O	0.0008
Be		P	0.0038
Bi		Pb	(0.001)
C	0.298	Pd	
Ca	0.0011	Pr	
Cd		Pt	
Ce		Re	
Co	4.44	Rh	
Cr	0.99	Ru	
Cu	0.143	S	0.0008
Fe		Sb	(0.001)
Ga		Se	
Gd		Si	0.1
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.086
Li		W	(0.01)
Mg		Y	
Mn	0.226	Zn	(0.0002)
Mo	1.01	Zr	(0.003)
N	0.0025		

Section 8

Stainless Steel

Name IARM-Fe155PH-18

Description AISI 15-5PH

Grade AISI 15-5PH

UNS S15500

Name IARM-289A ↓

Description Austenitic Stainless Steel

Grade AISI 301

UNS S30100

Name IARM-289B

Description Austenitic Stainless Steel

Grade AISI 301

UNS S30100

Name IARM-241D

Description Austenitic Stainless Steel

Grade AISI 302

UNS S30200

Name IARM-234A ↓

Description Austenitic Stainless Steel

Grade AISI 302 HQ

UNS S30430

Ag		Na	
Al	0.014	Nb	0.273
As	0.0026	Nd	
Au		Ni	4.79
B	0.0005	O	0.0028
Be		P	0.021
Bi	(<0.001)	Pb	(<0.005)
C	0.015	Pd	
Ca	(0.002)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.024	Rh	
Cr	15.13	Ru	
Cu	3.35	S	0.0004
Fe	75.03	Sb	(<0.007)
Ga		Se	(<0.005)
Gd		Si	0.43
Ge		Sn	0.0021
H	(0.0001)	Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	(<0.007)
Ir		Tl	
La		V	0.055
Li		W	0.019
Mg	(<0.001)	Y	
Mn	0.616	Zn	(<0.007)
Mo	0.129	Zr	(<0.005)
N	0.0494		

Ag		Na	
Al	0.01	Nb	0.008
As		Nd	
Au		Ni	7.12
B	0.0003	O	0.0104
Be		P	0.006
Bi		Pb	
C	0.126	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.054	Rh	
Cr	17	Ru	
Cu	0.016	S	0.0019
Fe		Sb	
Ga		Se	
Gd		Si	0.58
Ge		Sn	0.002
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.028
Ir		Tl	
La		V	0.01
Li		W	0.01
Mg		Y	
Mn	1.67	Zn	
Mo	0.005	Zr	
N	0.0032		

Ag		Na	
Al	0.007	Nb	0.013
As	(<0.004)	Nd	
Au		Ni	7.02
B	0.0008	O	0.017
Be		P	0.004
Bi		Pb	(0.005)
C	0.161	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce	(<0.001)	Re	
Co	0.013	Rh	
Cr	17.09	Ru	
Cu	0.241	S	0.0025
Fe		Sb	(<0.001)
Ga		Se	(<0.006)
Gd		Si	0.99
Ge		Sn	0.002
H		Sr	
Hf		Ta	(0.003)
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	0.018
Li		W	0.012
Mg	(<0.001)	Y	
Mn	1.92	Zn	(<0.03)
Mo	0.008	Zr	0.007
N	0.011		

Ag		Na	
Al	0.022	Nb	0.03
As	0	Nd	
Au		Ni	9
B	0.0011	O	(0.004)
Be		P	0.003
Bi		Pb	(0.0004)
C	0.125	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.022	Rh	
Cr	18.1	Ru	
Cu	0.24	S	0.0021
Fe		Sb	
Ga		Se	(0.002)
Gd		Si	0.99
Ge		Sn	0.002
H		Sr	
Hf		Ta	(0.004)
Hg		Te	
In		Ti	0.018
Ir		Tl	
La		V	0.034
Li		W	(0.01)
Mg		Y	
Mn	1.94	Zn	
Mo	(0.003)	Zr	(0.007)
N	0.006		

Ag		Na	
Al	0.36	Nb	0.2
As		Nd	
Au		Ni	8.06
B	0.0009	O	0.0007
Be		P	0.004
Bi		Pb	
C	0.102	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.35	Rh	
Cr	18	Ru	
Cu	3.65	S	0.0026
Fe		Sb	
Ga		Se	
Gd		Si	1.02
Ge		Sn	0.003
H		Sr	
Hf		Ta	(0.01)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.003
Li		W	0.02
Mg		Y	
Mn	1.99	Zn	
Mo	0.004	Zr	
N	0.096		

Stainless Steel

Name	IARM-234C
Description	Austenitic Stainless Steel
Grade	AISI 302 HQ
UNS	S30430

Name	IARM-Fe303-18
Description	Austenitic Stainless Steel
Grade	AISI 303
UNS	S30300

Name	IARM-253B
Description	Austenitic Stainless Steel
Grade	AISI 303Se
UNS	S30323

Name	IARM-Fe304H-18
Description	Austenitic Stainless Steel
Grade	AISI 304H
UNS	S30400

Name	IARM-162D ↓
Description	Austenitic Stainless Steel
Grade	AISI 304L
UNS	S30403

Ag		Na	
Al	0.035	Nb	0.053
As	(0.001)	Nd	
Au		Ni	9
B	0.0023	O	0.005
Be		P	0.009
Bi		Pb	(0.001)
C	0.092	Pd	
Ca	(0.0017)	Pr	
Cd		Pt	
Ce		Re	
Co	0.034	Rh	
Cr	18.15	Ru	
Cu	3.41	S	0.0027
Fe		Sb	(0.004)
Ga		Se	(0.003)
Gd		Si	0.88
Ge		Sn	0.0017
H	(<0.0010)	Sr	
Hf		Ta	0.003
Hg		Te	
In		Ti	0.026
Ir		Tl	
La		V	0.055
Li		W	0.006
Mg	(0.002)	Y	
Mn	1.93	Zn	(0.001)
Mo	0.012	Zr	0.006
N	0.01		

Ag		Na	
Al	(0.004)	Nb	0.015
As	0.007	Nd	
Au		Ni	8.12
B	0.0012	O	0.006
Be		P	0.033
Bi	(<0.0001)	Pb	(<0.0001)
C	0.046	Pd	
Ca	(0.002)	Pr	
Cd	(<0.0001)	Pt	
Ce		Re	
Co	0.14	Rh	
Cr	17.2	Ru	
Cu	0.61	S	0.35
Fe		Sb	(<0.001)
Ga		Se	(<0.001)
Gd		Si	0.47
Ge		Sn	0.015
H	(<0.002)	Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	(0.004)
Ir		Tl	
La		V	0.072
Li		W	0.029
Mg	(<0.001)	Y	
Mn	1.55	Zn	(<0.005)
Mo	0.42	Zr	(<0.005)
N	0.069		

Ag		Na	
Al	0.004	Nb	0.021
As	0.0052	Nd	
Au		Ni	9.11
B	0.0007	O	0.007
Be		P	0.13
Bi		Pb	(0.0002)
C	0.051	Pd	
Ca	(0.0006)	Pr	
Cd		Pt	
Ce	(<0.001)	Re	
Co	0.145	Rh	
Cr	17.64	Ru	
Cu	0.44	S	0.011
Fe		Sb	(0.0018)
Ga		Se	0.13
Gd		Si	0.46
Ge		Sn	0.012
H		Sr	
Hf		Ta	(0.003)
Hg		Te	
In		Ti	0.0027
Ir		Tl	
La		V	0.092
Li		W	0.05
Mg	(0.0006)	Y	
Mn	1.61	Zn	(<0.002)
Mo	0.59	Zr	(<0.008)
N	0.031		

Ag		Na	
Al	0.005	Nb	0.01
As	0.0076	Nd	
Au		Ni	8.35
B	(<0.005)	O	0.008
Be		P	0.031
Bi	(<0.005)	Pb	(<0.001)
C	0.052	Pd	
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.136	Rh	
Cr	18.4	Ru	
Cu	0.46	S	0.027
Fe	(70.1)	Sb	(<0.005)
Ga		Se	(<0.005)
Gd		Si	0.298
Ge		Sn	0.014
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	0.075
Li		W	0.027
Mg	(<0.005)	Y	
Mn	1.82	Zn	(<0.005)
Mo	0.43	Zr	(<0.005)
N	0.072		

Ag		Na	
Al	0.0026	Nb	0.009
As	0.0072	Nd	
Au		Ni	8.15
B	0.0027	O	0.005
Be		P	0.0296
Bi		Pb	(<0.003)
C	0.024	Pd	
Ca	(0.003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.074	Rh	
Cr	18.31	Ru	
Cu	0.52	S	0.0271
Fe		Sb	(0.0019)
Ga		Se	(<0.03)
Gd		Si	0.57
Ge		Sn	0.0102
H		Sr	
Hf		Ta	0.005
Hg		Te	
In		Ti	0.013
Ir		Tl	
La		V	0.063
Li		W	0.028
Mg	(0.0001)	Y	
Mn	1.82	Zn	(<0.007)
Mo	0.573	Zr	(<0.007)
N	0.097		

Stainless Steel

Name	IARM-Fe304L-18
Description	Austenitic Stainless Steel
Grade	AISI 304L
UNS	S30403

Name	IARM-3E ↓
Description	Austenitic Stainless Steel
Grade	AISI 309
UNS	S30900

Name	IARM-4D ↓
Description	Austenitic Stainless Steel
Grade	AISI 310
UNS	S31000

Name	IARM-4E ↓
Description	Austenitic Stainless Steel
Grade	AISI 310
UNS	S31000

Name	IARM-4F
Description	Austenitic Stainless Steel
Grade	AISI 310
UNS	S31000

Ag		Na	
Al	0.003	Nb	0.013
As	0.007	Nd	
Au		Ni	8.17
B	0.0012	O	0.006
Be		P	0.034
Bi		Pb	(<0.001)
C	0.024	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce	(<0.002)	Re	
Co	0.156	Rh	
Cr	18.34	Ru	
Cu	0.54	S	0.029
Fe		Sb	(0.002)
Ga		Se	(<0.001)
Gd		Si	0.43
Ge		Sn	0.013
H	(0.0008)	Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.0056
Ir		Tl	
La		V	0.076
Li		W	0.056
Mg	(<0.001)	Y	
Mn	1.39	Zn	(<0.005)
Mo	0.462	Zr	(<0.005)
N	0.081		

Ag		Na	
Al	0.0045	Nb	0.014
As	(0.005)	Nd	
Au		Ni	11.99
B	0.0005	O	0.0048
Be		P	0.0259
Bi		Pb	0.0003
C	0.0553	Pd	
Ca	0.0015	Pr	
Cd		Pt	
Ce		Re	
Co	0.12	Rh	
Cr	22.47	Ru	
Cu	0.259	S	0.0009
Fe		Sb	0.0013
Ga		Se	(<0.022)
Gd		Si	0.307
Ge		Sn	0.007
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	0.0022
Ir		Tl	
La		V	0.126
Li		W	0.018
Mg	(0.0003)	Y	
Mn	1.62	Zn	(0.0004)
Mo	0.215	Zr	0.0018
N	0.063		

Ag		Na	
Al	0.009	Nb	0.01
As	(0.003)	Nd	
Au		Ni	20.2
B	0.0008	O	0.004
Be		P	0.022
Bi		Pb	(0.0003)
C	0.052	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.07	Rh	
Cr	24.34	Ru	
Cu	0.217	S	0.0009
Fe		Sb	
Ga		Se	
Gd		Si	0.49
Ge		Sn	0.007
H		Sr	
Hf		Ta	0.005
Hg		Te	
In		Ti	0.0042
Ir		Tl	
La		V	0.073
Li		W	0.026
Mg	(0.0003)	Y	
Mn	1.2	Zn	
Mo	0.39	Zr	(0.001)
N	0.046		

Ag		Na	
Al	0.004	Nb	0.024
As	(0.005)	Nd	
Au		Ni	20.18
B	0.0011	O	0.0021
Be		P	0.0224
Bi		Pb	
C	0.044	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.066	Rh	
Cr	24.25	Ru	
Cu	0.234	S	0.0006
Fe		Sb	
Ga		Se	
Gd		Si	0.514
Ge		Sn	0.006
H		Sr	
Hf		Ta	0.005
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.052
Li		W	0.046
Mg		Y	
Mn	1.07	Zn	
Mo	0.32	Zr	(0.001)
N	0.038		

Ag		Na	
Al	0.015	Nb	0.007
As	0.003	Nd	
Au		Ni	20.1
B	0.0012	O	0.004
Be		P	0.0195
Bi		Pb	(<0.001)
C	0.047	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce	(<0.005)	Re	
Co	0.067	Rh	
Cr	24.5	Ru	
Cu	0.146	S	0.0015
Fe		Sb	(0.001)
Ga		Se	(0.001)
Gd		Si	0.494
Ge		Sn	0.005
H		Sr	
Hf		Ta	0.007
Hg		Te	
In		Ti	0.0031
Ir		Tl	
La		V	0.146
Li		W	0.012
Mg	(<0.002)	Y	
Mn	1.17	Zn	(0.001)
Mo	0.142	Zr	0.002
N	0.056		

Stainless Steel

Name	IARM-4G
Description	Austenitic Stainless Steel
Grade	AISI 310
UNS	S31000

Name	MBH-13X 31008 A
Description	Austenitic Stainless Steel
Grade	AISI 310S
UNS	S31008

Name	IARM-339A
Description	Austenitic Stainless Steel
Grade	AISI 316H
UNS	S31609

Name	IARM-Fe316L-18
Description	Austenitic Stainless Steel
Grade	AISI 316L
UNS	S31603

Name	IARM-153C
Description	Austenitic Stainless Steel
Grade	AISI 317L
UNS	S31703

Ag		Na	
Al	0.008	Nb	0.008
As	0.005	Nd	
Au		Ni	19.2
B	0.0032	O	0.003
Be		P	0.027
Bi		Pb	(0.0005)
C	0.0454	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.085	Rh	
Cr	24.9	Ru	
Cu	0.32	S	0.0008
Fe		Sb	(0.001)
Ga		Se	(0.001)
Gd		Si	0.63
Ge		Sn	0.008
H		Sr	
Hf		Ta	0.008
Hg		Te	
In		Ti	0.029
Ir		Tl	
La		V	0.092
Li		W	0.017
Mg	0.007	Y	
Mn	1.36	Zn	(0.0005)
Mo	0.58	Zr	0.002
N	0.058		

Ag		Na	
Al		Nb	0.013
As		Nd	
Au		Ni	19.34
B		O	
Be		P	0.0302
Bi		Pb	
C	0.063	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.078	Rh	
Cr	24.48	Ru	
Cu	0.159	S	0.004
Fe		Sb	
Ga		Se	
Gd		Si	0.503
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.078
Li		W	0.165
Mg		Y	
Mn	1.234	Zn	
Mo	0.338	Zr	
N	0.063		

Ag		Na	
Al	0.004	Nb	0.005
As	(0.001)	Nd	
Au		Ni	12.9
B	0.0006	O	0.016
Be		P	0.004
Bi		Pb	(0.002)
C	0.16	Pd	
Ca	0.0014	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	17	Ru	
Cu	0.021	S	0.009
Fe		Sb	
Ga		Se	(0.0003)
Gd		Si	0.64
Ge		Sn	0.002
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.007
Li		W	0.019
Mg	(0.0001)	Y	
Mn	1.71	Zn	(0.001)
Mo	2.79	Zr	0.003
N	0.006		

Ag		Na	
Al	0.006	Nb	0.027
As	(<0.023)	Nd	
Au		Ni	10.12
B	(0.001)	O	0.005
Be		P	0.033
Bi		Pb	(<0.003)
C	0.021	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce	(<0.002)	Re	
Co	0.209	Rh	
Cr	16.7	Ru	
Cu	0.55	S	0.029
Fe		Sb	(0.0018)
Ga		Se	(<0.004)
Gd		Si	0.438
Ge		Sn	0.013
H	(0.0008)	Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.067
Li		W	0.06
Mg	(0.0004)	Y	
Mn	1.7	Zn	(<0.005)
Mo	2.02	Zr	(<0.005)
N	0.067		

Ag		Na	
Al	0.003	Nb	0.015
As	0.0061	Nd	
Au		Ni	11.1
B	0.0009	O	0.006
Be		P	0.0289
Bi		Pb	(0.001)
C	0.0225	Pd	
Ca	(0.0026)	Pr	
Cd		Pt	
Ce		Re	
Co	0.251	Rh	
Cr	18.22	Ru	
Cu	0.442	S	0.0288
Fe		Sb	(0.002)
Ga		Se	(<0.04)
Gd		Si	0.349
Ge		Sn	0.01
H	(<0.001)	Sr	
Hf		Ta	(0.006)
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.058
Li		W	0.043
Mg		Y	
Mn	1.6	Zn	(<0.001)
Mo	3	Zr	0.004
N	0.086		

Stainless Steel

Name MBH-13X 31726 A
Description Austenitic Stainless Steel
Grade AISI 317LMN
UNS S31726

Name IARM-6I ↓
Description Austenitic Stainless Steel
Grade AISI 321
UNS S32100

Name IARM-6J
Description Austenitic Stainless Steel
Grade AISI 321
UNS S32100

Name MBH-13X 32900 A
Description Austenitic Stainless Steel
Grade AISI 329
UNS S32900

Name IARM-8H
Description Austenitic Stainless Steel
Grade AISI 347
UNS S34700

Ag		Na	
Al	0.0208	Nb	0.009
As		Nd	
Au		Ni	13.56
B		O	
Be		P	0.0218
Bi		Pb	
C	0.0124	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0502	Rh	
Cr	17.62	Ru	
Cu	0.206	S	0.0012
Fe		Sb	
Ga		Se	
Gd		Si	0.415
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0426
Li		W	0.0384
Mg		Y	
Mn	1.849	Zn	
Mo	4.56	Zr	
N	0.135		

Ag		Na	
Al	0.084	Nb	0.018
As	(0.005)	Nd	
Au		Ni	9.2
B	0.0034	O	0.0012
Be		P	0.0208
Bi		Pb	(<0.02)
C	0.049	Pd	
Ca	(0.0004)	Pr	
Cd		Pt	
Ce	(<0.005)	Re	
Co	0.052	Rh	
Cr	17.76	Ru	
Cu	0.202	S	0.023
Fe		Sb	(0.0008)
Ga		Se	(<0.03)
Gd		Si	0.31
Ge		Sn	0.006
H	(<0.001)	Sr	
Hf		Ta	(<0.01)
Hg		Te	
In		Ti	0.6
Ir		Tl	
La		V	0.048
Li		W	0.023
Mg	(<0.03)	Y	
Mn	1.76	Zn	(0.003)
Mo	0.133	Zr	(0.003)
N	0.013		

Ag		Na	
Al	0.0195	Nb	0.01
As	(<0.04)	Nd	
Au		Ni	9
B	0.0024	O	(0.001)
Be		P	0.028
Bi		Pb	(<0.03)
C	0.045	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.191	Rh	
Cr	17.74	Ru	
Cu	0.383	S	0.002
Fe		Sb	(<0.005)
Ga		Se	(<0.001)
Gd		Si	0.62
Ge		Sn	0.009
H		Sr	
Hf		Ta	(0.01)
Hg		Te	
In		Ti	0.34
Ir		Tl	
La		V	0.081
Li		W	0.026
Mg	(<0.001)	Y	
Mn	1.52	Zn	(<0.001)
Mo	0.387	Zr	(<0.002)
N	0.0109		

Ag		Na	
Al	0.007	Nb	
As		Nd	
Au		Ni	5.57
B	0.0028	O	
Be		P	0.0276
Bi		Pb	
C	0.0251	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0724	Rh	
Cr	24.91	Ru	
Cu	0.354	S	0.0269
Fe		Sb	
Ga		Se	
Gd		Si	0.556
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0938
Li		W	0.017
Mg		Y	
Mn	1.478	Zn	
Mo	1.31	Zr	
N	0.097		

Ag		Na	
Al	0.005	Nb	0.48
As	(<0.01)	Nd	
Au		Ni	9.08
B	(0.0002)	O	(0.004)
Be		P	0.025
Bi		Pb	(<0.03)
C	0.049	Pd	
Ca	(<0.002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.083	Rh	
Cr	17.14	Ru	
Cu	0.192	S	0.002
Fe		Sb	(<0.002)
Ga		Se	(<0.001)
Gd		Si	0.4
Ge		Sn	0.008
H		Sr	
Hf		Ta	(0.01)
Hg		Te	
In		Ti	0.0027
Ir		Tl	
La		V	0.049
Li		W	0.016
Mg	(<0.001)	Y	
Mn	1.81	Zn	(<0.001)
Mo	0.237	Zr	(<0.002)
N	0.027		

Stainless Steel

Name	IARM-8I
Description	Austenitic Stainless Steel
Grade	AISI 347
UNS	S34700

Name	IARM-316A
Description	Austenitic Stainless Steel
Grade	Alloy 253MA
UNS	S30815

Name	IARM-FeN40-18 ♦
Description	Austenitic Stainless Steel
Grade	Nitronic 40
UNS	S21900

Name	MBH-13X NSA10 A
Description	Austenitic Stainless Steel
Grade	Nitronic 50
UNS	S20910

Name	IARM-17D
Description	Austenitic Stainless Steel
Grade	Nitronic 50
UNS	S20910

Ag		Na	
Al	0.003	Nb	0.6
As	(<0.008)	Nd	
Au		Ni	9.01
B	(0.0005)	O	(0.004)
Be		P	0.0352
Bi		Pb	(<0.03)
C	0.0424	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.301	Rh	
Cr	17.08	Ru	
Cu	0.441	S	0.0118
Fe		Sb	(<0.002)
Ga		Se	(<0.001)
Gd		Si	0.38
Ge		Sn	0.012
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.008
Ir		Tl	
La		V	0.057
Li		W	0.06
Mg		Y	
Mn	1.395	Zn	(<0.001)
Mo	0.416	Zr	(<0.005)
N	0.052		

Ag		Na	
Al	0.006	Nb	0.003
As	0.007	Nd	
Au		Ni	10.81
B	(0.0003)	O	0.0052
Be		P	0.023
Bi		Pb	(0.0001)
C	0.07	Pd	
Ca	0.0017	Pr	
Cd		Pt	
Ce	0.064	Re	
Co	0.118	Rh	
Cr	21.07	Ru	
Cu	0.19	S	0.0011
Fe		Sb	
Ga		Se	
Gd		Si	1.5
Ge		Sn	0.006
H		Sr	
Hf		Ta	0.003
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.042
Li		W	0.022
Mg		Y	
Mn	0.61	Zn	(0.0008)
Mo	0.25	Zr	
N	0.1605		

Ag		Na	
Al	(0.007)	Nb	0.032
As	(<0.005)	Nd	
Au		Ni	6.42
B	(<0.005)	O	(0.002)
Be		P	0.025
Bi		Pb	(<0.005)
C	0.019	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.122	Rh	
Cr	19.45	Ru	
Cu	0.421	S	0.0012
Fe	(63.5)	Sb	(<0.002)
Ga		Se	
Gd		Si	0.31
Ge		Sn	0.0081
H		Sr	
Hf		Ta	(<0.002)
Hg		Te	
In		Ti	(0.003)
Ir		Tl	
La		V	0.086
Li		W	0.03
Mg	(<0.001)	Y	
Mn	9.13	Zn	
Mo	0.343	Zr	(<0.005)
N	0.348		

Ag		Na	
Al		Nb	0.142
As		Nd	
Au		Ni	12.96
B	(0.0029)	O	
Be		P	0.0207
Bi		Pb	
C	0.016	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.061	Rh	
Cr	20.69	Ru	
Cu	0.175	S	0.0006
Fe		Sb	
Ga		Se	
Gd		Si	0.375
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.151
Li		W	0.061
Mg		Y	
Mn	5.23	Zn	
Mo	2.636	Zr	
N	0.343		

Ag		Na	
Al	0.0032	Nb	0.14
As	0.005	Nd	
Au		Ni	11.83
B	0.001	O	0.003
Be		P	0.026
Bi		Pb	(0.0002)
C	0.041	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.23	Rh	
Cr	21.06	Ru	
Cu	0.412	S	0.0018
Fe		Sb	(0.001)
Ga		Se	(0.001)
Gd		Si	0.416
Ge		Sn	0.0044
H		Sr	
Hf		Ta	0.003
Hg		Te	
In		Ti	0.01
Ir		Tl	
La		V	0.118
Li		W	0.056
Mg	(0.0003)	Y	
Mn	4.15	Zn	(0.0004)
Mo	1.52	Zr	0.002
N	0.311		

Stainless Steel

Name IARM-FeN50-18
Description Austenitic Stainless Steel
Grade Nitronic 50
UNS S20910

Name MBH-13X 21800 A
Description Austenitic Stainless Steel
Grade Nitronic 60
UNS S21800

Name IARM-18D
Description Austenitic Stainless Steel
Grade Nitronic 60
UNS S21800

Name IARM-295A
Description Austenitic Stainless Steel
Grade NMS 140
UNS

Name IARM-294A ↓
Description Austenitic Stainless Steel
Grade NMS J38
UNS

Ag		Na	
Al	0.006	Nb	0.18
As	(0.006)	Nd	
Au		Ni	11.9
B	(0.0007)	O	0.006
Be		P	0.026
Bi	(<0.005)	Pb	(<0.005)
C	0.03	Pd	
Ca	(0.0014)	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.081	Rh	
Cr	21	Ru	
Cu	0.28	S	0.0013
Fe		Sb	(<0.02)
Ga		Se	(<0.005)
Gd		Si	0.24
Ge		Sn	0.007
H	(<0.002)	Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.121
Li		W	0.023
Mg	(<0.005)	Y	
Mn	5.27	Zn	(<0.005)
Mo	2.01	Zr	(<0.005)
N	0.26		

Ag		Na	
Al	0.012	Nb	0.007
As		Nd	
Au		Ni	8.32
B	(0.001)	O	
Be		P	0.032
Bi		Pb	
C	0.0765	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0943	Rh	
Cr	16.81	Ru	
Cu	0.431	S	0.0011
Fe		Sb	
Ga		Se	
Gd		Si	4.03
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0619
Li		W	
Mg		Y	
Mn	8	Zn	
Mo	0.325	Zr	
N	0.125		

Ag		Na	
Al	0.006	Nb	0.031
As	(0.007)	Nd	
Au		Ni	8.39
B	0.0011	O	(0.004)
Be		P	0.032
Bi	(<0.001)	Pb	(<0.11)
C	0.069	Pd	
Ca	(0.002)	Pr	
Cd	(<0.001)	Pt	
Ce	(<0.005)	Re	
Co	0.086	Rh	
Cr	16.7	Ru	
Cu	0.421	S	0.0025
Fe		Sb	(<0.004)
Ga		Se	(<0.03)
Gd		Si	3.68
Ge		Sn	0.007
H		Sr	
Hf		Ta	(0.01)
Hg		Te	
In		Ti	0.012
Ir		Tl	
La		V	0.064
Li		W	0.026
Mg	(<0.021)	Y	
Mn	8.1	Zn	(<0.02)
Mo	0.325	Zr	(0.005)
N	0.17		

Ag		Na	
Al	(0.01)	Nb	0.018
As		Nd	
Au		Ni	1.84
B	0.002	O	0.003
Be		P	0.028
Bi		Pb	
C	0.021	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.021	Rh	
Cr	18	Ru	
Cu	0.113	S	0.0041
Fe		Sb	
Ga		Se	
Gd		Si	0.36
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0019
Ir		Tl	
La		V	0.046
Li		W	0.016
Mg		Y	
Mn	19.7	Zn	
Mo	0.97	Zr	(0.001)
N	0.62		

Ag		Na	
Al	(0.01)	Nb	0.03
As		Nd	
Au		Ni	2.9
B	(0.003)	O	0.003
Be		P	0.026
Bi		Pb	(0.001)
C	0.017	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.021	Rh	
Cr	19.7	Ru	
Cu	0.34	S	0.0028
Fe		Sb	
Ga		Se	
Gd		Si	0.43
Ge		Sn	(0.006)
H		Sr	
Hf		Ta	(0.003)
Hg		Te	
In		Ti	(0.002)
Ir		Tl	
La		V	0.046
Li		W	0.01
Mg		Y	
Mn	21.6	Zn	
Mo	1.8	Zr	(0.002)
N	0.78		

Stainless Steel

Name IARM-296A ↓
Description Austenitic Stainless Steel
Grade NMS MDC
UNS

Ag		Na	
Al	(0.005)	Nb	0.043
As		Nd	
Au		Ni	1.71
B	(0.001)	O	0.003
Be		P	0.027
Bi		Pb	
C	0.074	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.018	Rh	
Cr	11.2	Ru	
Cu	0.12	S	0.002
Fe		Sb	
Ga		Se	
Gd		Si	0.38
Ge		Sn	0.0007
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.056
Li		W	0.01
Mg		Y	
Mn	10.6	Zn	
Mo	0.6	Zr	
N	0.23		

Name MBH-13X 12533 Z ↓
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.059	Nb	
As		Nd	
Au		Ni	5.06
B	0.01	O	
Be		P	0.0149
Bi		Pb	
C	0.11	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0299	Rh	
Cr	18.8	Ru	
Cu	0.131	S	0.0156
Fe		Sb	
Ga		Se	
Gd		Si	0.44
Ge		Sn	0.0097
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.147
Ir		Tl	
La		V	0.181
Li		W	
Mg		Y	
Mn	0.812	Zn	
Mo	1.05	Zr	
N	0.073		

Name MBH-13X 12534 X
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0485	Nb	0.201
As		Nd	
Au		Ni	8.5
B		O	
Be		P	0.0192
Bi		Pb	
C	0.0716	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0602	Rh	
Cr	17.71	Ru	
Cu	0.0586	S	0.0086
Fe		Sb	
Ga		Se	
Gd		Si	0.811
Ge		Sn	
H		Sr	
Hf		Ta	0.031
Hg		Te	
In		Ti	0.348
Ir		Tl	
La		V	0.11
Li		W	0.01
Mg		Y	
Mn	0.589	Zn	
Mo	2.04	Zr	
N			

Name MBH-13X 12535 BE
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.194	Nb	
As		Nd	
Au		Ni	14.79
B	0.0051	O	
Be		P	0.04
Bi		Pb	
C	0.229	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.146	Rh	
Cr	16.95	Ru	
Cu	0.13	S	0.0591
Fe		Sb	
Ga		Se	
Gd		Si	1.407
Ge		Sn	0.0194
H		Sr	
Hf		Ta	(0.02)
Hg		Te	
In		Ti	0.625
Ir		Tl	
La		V	0.252
Li		W	
Mg		Y	
Mn	0.342	Zn	
Mo	4.09	Zr	
N	0.029		

Name MBH-13X 12536 T
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.108	Nb	0.06
As		Nd	
Au		Ni	12.12
B	0.0214	O	
Be		P	0.0449
Bi		Pb	
C	0.146	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.28	Rh	
Cr	16.09	Ru	
Cu	0.0793	S	0.09
Fe		Sb	
Ga		Se	
Gd		Si	0.546
Ge		Sn	0.0068
H		Sr	
Hf		Ta	0.104
Hg		Te	
In		Ti	0.444
Ir		Tl	
La		V	0.0513
Li		W	
Mg		Y	
Mn	0.374	Zn	
Mo	2.48	Zr	
N	0.0084		

Stainless Steel

Name MBH-13X 12537 T
Description Austenitic Stainless Steel
Grade
UNS

Name MBH-13X 12853 L
Description Austenitic Stainless Steel
Grade
UNS

Name MBH-13X 12854 M
Description Austenitic Stainless Steel
Grade
UNS

Name MBH-13X 12855 N
Description Austenitic Stainless Steel
Grade
UNS

Name MBH-13X 14828 A
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	(0.062)	Nb	0.102
As		Nd	
Au		Ni	10.71
B	0.0029	O	
Be		P	0.0382
Bi		Pb	
C	0.0889	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.152	Rh	
Cr	20.43	Ru	
Cu	0.248	S	0.0206
Fe		Sb	
Ga		Se	
Gd		Si	1.151
Ge		Sn	0.0401
H		Sr	
Hf		Ta	0.0194
Hg		Te	
In		Ti	0.273
Ir		Tl	
La		V	0.0908
Li		W	
Mg		Y	
Mn	1.116	Zn	
Mo	3.05	Zr	
N	0.048		

Ag		Na	
Al	0.18	Nb	0.18
As		Nd	
Au		Ni	12.31
B	0.0018	O	
Be		P	0.0053
Bi		Pb	
C	0.069	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0415	Rh	
Cr	17.13	Ru	
Cu	0.092	S	0.0062
Fe		Sb	
Ga		Se	
Gd		Si	0.994
Ge		Sn	
H		Sr	
Hf		Ta	0.034
Hg		Te	
In		Ti	0.0455
Ir		Tl	
La		V	
Li		W	0.089
Mg		Y	
Mn	1.156	Zn	
Mo	2.718	Zr	
N	0.0086		

Ag		Na	
Al		Nb	0.332
As		Nd	
Au		Ni	11.38
B	0.0101	O	
Be		P	0.0388
Bi	0.0052	Pb	
C	0.0814	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.344	Rh	
Cr	15.64	Ru	
Cu	0.205	S	0.0287
Fe		Sb	0.068
Ga		Se	
Gd		Si	0.894
Ge		Sn	
H		Sr	
Hf		Ta	0.02
Hg		Te	
In		Ti	0.0522
Ir		Tl	
La		V	
Li		W	0.141
Mg		Y	
Mn	1.84	Zn	
Mo	2	Zr	0.0146
N	0.0097		

Ag		Na	
Al	0.048	Nb	0.098
As		Nd	
Au		Ni	11.79
B	0.0098	O	
Be		P	0.002
Bi		Pb	
C	0.107	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.155	Rh	
Cr	16.29	Ru	
Cu	0.34	S	0.0063
Fe		Sb	0.093
Ga		Se	
Gd		Si	0.863
Ge		Sn	
H		Sr	
Hf		Ta	0.122
Hg		Te	
In		Ti	0.083
Ir		Tl	
La		V	
Li		W	0.199
Mg		Y	
Mn	0.918	Zn	
Mo	2.96	Zr	
N	0.0078		

Ag		Na	
Al	0.008	Nb	0.0163
As		Nd	
Au		Ni	11.25
B		O	
Be		P	0.0268
Bi		Pb	
C	0.104	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.143	Rh	
Cr	19.37	Ru	
Cu	0.409	S	0.0067
Fe		Sb	
Ga		Se	
Gd		Si	2.19
Ge		Sn	0.0128
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0803
Li		W	0.0167
Mg		Y	
Mn	1.529	Zn	
Mo	0.301	Zr	
N	0.0377		

Stainless Steel

Name MBH-13X 17001 C
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0312	Nb	0.546
As		Nd	
Au		Ni	6.31
B	0.0085	O	
Be		P	0.055
Bi		Pb	
C	0.0769	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0979	Rh	
Cr	14.83	Ru	
Cu	0.0161	S	0.0134
Fe		Sb	
Ga		Se	
Gd		Si	0.215
Ge		Sn	
H		Sr	
Hf		Ta	0.0124
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.543	Zn	
Mo	0.0967	Zr	
N			

Name MBH-13X 17002 E
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	(0.03)	Nb	0.487
As		Nd	
Au		Ni	7.87
B	0.0012	O	
Be		P	0.0409
Bi		Pb	
C	0.112	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0702	Rh	
Cr	17.45	Ru	
Cu	0.1012	S	0.025
Fe		Sb	
Ga		Se	
Gd		Si	0.486
Ge		Sn	
H		Sr	
Hf		Ta	(0.012)
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0587
Li		W	
Mg		Y	
Mn	0.801	Zn	
Mo	0.204	Zr	
N	0.061		

Name MBH-13X 17003 A ↓
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	0.34
As		Nd	
Au		Ni	11.9
B		O	
Be		P	0.037
Bi		Pb	
C	0.1	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.07	Rh	
Cr	11.89	Ru	
Cu	0.08	S	0.035
Fe		Sb	
Ga		Se	
Gd		Si	0.78
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.85	Zn	
Mo	0.27	Zr	
N			

Name MBH-13X 17004 B
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0433	Nb	0.179
As		Nd	
Au		Ni	16.04
B	0.0066	O	
Be		P	0.0189
Bi		Pb	
C	0.0844	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0555	Rh	
Cr	21.37	Ru	
Cu	0.0449	S	0.0396
Fe		Sb	
Ga		Se	
Gd		Si	1.23
Ge		Sn	
H		Sr	
Hf		Ta	0.057
Hg		Te	
In		Ti	0.034
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.497	Zn	
Mo	0.455	Zr	
N	0.0086		

Name MBH-13X 17005 E
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.049	Nb	0.101
As		Nd	
Au		Ni	20.06
B	0.003	O	
Be		P	0.004
Bi		Pb	
C	0.0217	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0265	Rh	
Cr	24.69	Ru	
Cu	0.12	S	0.0431
Fe		Sb	
Ga		Se	
Gd		Si	1.739
Ge		Sn	
H		Sr	
Hf		Ta	0.015
Hg		Te	
In		Ti	0.0073
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.209	Zn	
Mo	0.599	Zr	
N	0.0097		

Stainless Steel

Name MBH-13X 18001 B
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0157	Nb	0.612
As		Nd	
Au		Ni	6.13
B		O	
Be		P	0.009
Bi		Pb	
C	0.207	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0231	Rh	
Cr	15.92	Ru	
Cu	0.149	S	0.0786
Fe		Sb	
Ga		Se	
Gd		Si	0.203
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0996
Li		W	
Mg		Y	
Mn	0.463	Zn	
Mo	0.816	Zr	
N	0.0347		

Name MBH-13X 18002 D
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0617	Nb	1.531
As		Nd	
Au		Ni	7.92
B		O	
Be		P	0.0245
Bi		Pb	
C	0.159	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0514	Rh	
Cr	17.77	Ru	
Cu	0.116	S	0.0487
Fe		Sb	
Ga		Se	
Gd		Si	0.352
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0542
Li		W	
Mg		Y	
Mn	0.722	Zn	
Mo	0.209	Zr	
N	0.072		

Name MBH-13X 18003 C
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0292	Nb	1.042
As		Nd	
Au		Ni	10.08
B		O	
Be		P	0.0545
Bi		Pb	
C	0.113	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.1	Rh	
Cr	19.56	Ru	
Cu	0.0433	S	0.0245
Fe		Sb	
Ga		Se	
Gd		Si	0.805
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.075
Li		W	
Mg		Y	
Mn	1	Zn	
Mo	0.401	Zr	
N	0.09		

Name MBH-13X 19003 C ↓
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	0.12
As		Nd	
Au		Ni	12.46
B		O	
Be		P	0.0382
Bi		Pb	
C	0.047	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.105	Rh	
Cr	18.99	Ru	
Cu	0.171	S	0.046
Fe		Sb	
Ga		Se	
Gd		Si	0.497
Ge		Sn	
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0486
Li		W	
Mg		Y	
Mn	1.138	Zn	
Mo	2.5	Zr	
N	0.077		

Name MBH-13X 19004 C
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.03	Nb	0.152
As		Nd	
Au		Ni	17.9
B	(0.001)	O	
Be		P	0.074
Bi		Pb	
C	0.075	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0501	Rh	
Cr	22.77	Ru	
Cu	0.0112	S	0.0135
Fe		Sb	
Ga		Se	
Gd		Si	0.356
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	0.011
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0417
Li		W	
Mg		Y	
Mn	2.017	Zn	
Mo	3.43	Zr	
N			

Stainless Steel

Name MBH-13X 30300 A
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	8.55
B	0.0035	O	
Be		P	0.0199
Bi		Pb	
C	0.041	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0259	Rh	
Cr	17.59	Ru	
Cu	0.0252	S	0.312
Fe		Sb	
Ga		Se	
Gd		Si	0.424
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.092
Li		W	
Mg		Y	
Mn	1.84	Zn	
Mo	0.333	Zr	
N	0.035		

Name MBH-13X 30403 B
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0056	Nb	0.0201
As		Nd	
Au		Ni	8.13
B		O	
Be		P	0.0321
Bi		Pb	
C	0.0277	Pd	
Ca	0.0027	Pr	
Cd		Pt	
Ce		Re	
Co	0.178	Rh	
Cr	18.3	Ru	
Cu	0.497	S	0.0266
Fe		Sb	
Ga		Se	
Gd		Si	0.288
Ge		Sn	0.0139
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0013
Ir		Tl	
La		V	0.07
Li		W	0.035
Mg		Y	
Mn	1.82	Zn	
Mo	0.313	Zr	
N	0.083		

Name MBH-13X 30908 A
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0035	Nb	0.0142
As		Nd	
Au		Ni	12.05
B	0.0027	O	
Be		P	0.0267
Bi		Pb	
C	0.056	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.12	Rh	
Cr	22.51	Ru	
Cu	0.269	S	0.0011
Fe		Sb	
Ga		Se	
Gd		Si	0.32
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.128
Li		W	
Mg		Y	
Mn	1.638	Zn	
Mo	0.221	Zr	
N	0.0652		

Name MBH-13X 31400 A
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0225	Nb	0.0189
As		Nd	
Au		Ni	18.76
B		O	
Be		P	0.0262
Bi		Pb	
C	0.033	Pd	
Ca	0.0024	Pr	
Cd		Pt	
Ce		Re	
Co	0.1296	Rh	
Cr	24.38	Ru	
Cu	0.21	S	0.0006
Fe		Sb	
Ga		Se	
Gd		Si	2.23
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.092
Li		W	0.015
Mg		Y	
Mn	1.603	Zn	
Mo	0.24	Zr	
N	0.0288		

Name MBH-13X 31635 A
Description Austenitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0054	Nb	0.01
As		Nd	
Au		Ni	10.8
B		O	
Be		P	0.0352
Bi		Pb	
C	0.0254	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.174	Rh	
Cr	16.98	Ru	
Cu	0.404	S	0.0301
Fe		Sb	
Ga		Se	
Gd		Si	0.487
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.149
Ir		Tl	
La		V	0.0584
Li		W	0.031
Mg		Y	
Mn	1.807	Zn	
Mo	2.089	Zr	
N	0.02		

Stainless Steel

Name MBH-13X 32100 A
Description Austenitic Stainless Steel
Grade
UNS

Name MBH-13X 34700 A
Description Austenitic Stainless Steel
Grade
UNS

Name MBH-13X 34700 A
Description Chromium-Steel
Grade
UNS

Name MBH-13X 32101 A
Description Duplex Stainless Steel
Grade Alloy 2101
UNS S32101

Name IARM-292A ↓
Description Duplex Stainless Steel
Grade Alloy 2101
UNS S32101

Ag		Na	
Al	0.0247	Nb	0.0191
As		Nd	
Au		Ni	9.32
B	0.0025	O	
Be		P	0.0298
Bi		Pb	
C	0.0463	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.105	Rh	
Cr	17.39	Ru	
Cu	0.415	S	0.0011
Fe		Sb	
Ga		Se	
Gd		Si	0.498
Ge		Sn	0.0115
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.376
Ir		Tl	
La		V	0.106
Li		W	0.021
Mg		Y	
Mn	1.52	Zn	
Mo	0.282	Zr	
N	0.0115		

Ag		Na	
Al	0.025	Nb	0.329
As		Nd	
Au		Ni	9.32
B	0.0007	O	
Be		P	0.0276
Bi		Pb	
C	0.016	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.132	Rh	
Cr	17.22	Ru	
Cu	0.165	S	(0.0005)
Fe		Sb	
Ga		Se	
Gd		Si	0.48
Ge		Sn	0.0053
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.123
Li		W	0.144
Mg		Y	
Mn	1.283	Zn	
Mo	0.392	Zr	
N	0.0163		

Ag		Na	
Al	(0.147)	Nb	
As		Nd	
Au		Ni	0.309
B		O	
Be		P	0.082
Bi		Pb	0.012
C	2.76	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.128	Rh	
Cr	29.31	Ru	
Cu	0.103	S	0.0297
Fe		Sb	
Ga		Se	
Gd		Si	0.365
Ge		Sn	0.036
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.132
Li		W	0.265
Mg		Y	
Mn	0.451	Zn	
Mo	0.091	Zr	
N			

Ag		Na	
Al	0.0122	Nb	0.007
As		Nd	
Au		Ni	1.476
B	0.0014	O	
Be		P	0.0194
Bi		Pb	
C	0.0325	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0347	Rh	
Cr	21.12	Ru	
Cu	0.295	S	(0.0004)
Fe		Sb	
Ga		Se	
Gd		Si	0.777
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.083
Li		W	
Mg		Y	
Mn	4.913	Zn	
Mo	0.097	Zr	
N	0.241		

Ag		Na	
Al	0.01	Nb	0.009
As	(<0.01)	Nd	
Au		Ni	1.47
B	0.0011	O	0.0024
Be		P	0.018
Bi		Pb	
C	0.03	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.031	Rh	
Cr	21.35	Ru	
Cu	0.29	S	0.001
Fe		Sb	
Ga		Se	
Gd		Si	0.75
Ge		Sn	0.004
H		Sr	
Hf		Ta	(0.006)
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	0.084
Li		W	0.01
Mg		Y	
Mn	5	Zn	
Mo	0.097	Zr	
N	0.245		

Stainless Steel

Name IARM-Fe2205-18
Description Duplex Stainless Steel
Grade Alloy 2205
UNS S32205

Name IARM-317A
Description Duplex Stainless Steel
Grade Alloy 2304
UNS S32304

Name MBH-13X NSA13 A
Description Duplex Stainless Steel
Grade Alloy 2507
UNS S32750

Name IARM-239C
Description Duplex Stainless Steel
Grade Alloy 255
UNS S32550

Name MBH-13X NSA7 B
Description Duplex Stainless Steel
Grade Ferralium 255
UNS S32550

Ag		Na	
Al	0.007	Nb	0.011
As	(0.003)	Nd	
Au		Ni	5.57
B	(0.002)	O	0.004
Be		P	0.023
Bi	(<0.0001)	Pb	(<0.003)
C	0.018	Pd	
Ca	(0.002)	Pr	
Cd	(<0.0001)	Pt	
Ce		Re	
Co	0.104	Rh	
Cr	22.6	Ru	
Cu	0.208	S	0.001
Fe		Sb	(0.001)
Ga		Se	(<0.001)
Gd		Si	0.46
Ge		Sn	0.006
H	(0.001)	Sr	
Hf		Ta	(0.02)
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.063
Li		W	0.024
Mg	(<0.001)	Y	
Mn	1.18	Zn	(<0.005)
Mo	3.2	Zr	(<0.005)
N	0.17		

Ag		Na	
Al	0.005	Nb	0.004
As	(0.006)	Nd	
Au		Ni	4.19
B	0.0019	O	0.0032
Be		P	0.028
Bi		Pb	(0.001)
C	0.025	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.064	Rh	
Cr	22.5	Ru	
Cu	0.21	S	0.0007
Fe		Sb	
Ga		Se	
Gd		Si	0.39
Ge		Sn	0.008
H		Sr	
Hf		Ta	(0.004)
Hg		Te	
In		Ti	(0.002)
Ir		Tl	
La		V	0.061
Li		W	0.015
Mg		Y	
Mn	1.26	Zn	
Mo	0.249	Zr	
N	0.123		

Ag		Na	
Al	(0.007)	Nb	0.028
As		Nd	
Au		Ni	6.73
B	0.003	O	
Be		P	0.0249
Bi		Pb	
C	0.02	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0328	Rh	
Cr	25.27	Ru	
Cu	0.156	S	0.0005
Fe		Sb	
Ga		Se	
Gd		Si	0.257
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0712
Li		W	0.035
Mg		Y	
Mn	0.761	Zn	
Mo	3.73	Zr	
N	0.269		

Ag		Na	
Al	0.007	Nb	0.006
As	(0.004)	Nd	
Au		Ni	6.14
B	0.0014	O	(0.007)
Be		P	0.023
Bi		Pb	(0.004)
C	0.017	Pd	
Ca	(<0.004)	Pr	
Cd		Pt	
Ce	(<0.005)	Re	
Co	0.039	Rh	
Cr	25.8	Ru	
Cu	1.49	S	0.001
Fe		Sb	(0.0004)
Ga		Se	(<0.03)
Gd		Si	0.38
Ge		Sn	0.003
H	(<0.001)	Sr	
Hf		Ta	(0.004)
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.083
Li		W	0.05
Mg	(<0.03)	Y	
Mn	0.87	Zn	(<0.03)
Mo	3.33	Zr	(0.003)
N	0.228		

Ag		Na	
Al	0.0142	Nb	(0.009)
As		Nd	
Au		Ni	6.37
B	0.0018	O	
Be		P	0.016
Bi		Pb	
C	0.013	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0471	Rh	
Cr	25.69	Ru	
Cu	1.53	S	0.0005
Fe		Sb	
Ga		Se	
Gd		Si	0.278
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0802
Li		W	0.133
Mg		Y	
Mn	0.864	Zn	
Mo	3.28	Zr	
N	0.232		

Stainless Steel

Name	IARM-239B ↓
Description	Duplex Stainless Steel
Grade	Ferrallium 255
UNS	S32550

Name	MBH-13X NSA8 B
Description	Duplex Stainless Steel
Grade	Zeron 100
UNS	S32760

Name	IARM-319A ↓
Description	Duplex Stainless Steel
Grade	Zeron 100
UNS	S32760

Name	IARM-FeZ100-18
Description	Duplex Stainless Steel
Grade	Zeron 100
UNS	S32760

Name	IARM-11D
Description	Ferritic Stainless Steel
Grade	AISI 430
UNS	S43000

Ag		Na	
Al	0.008	Nb	0.024
As	(0.003)	Nd	
Au		Ni	5.78
B	0.0008	O	0.004
Be		P	0.025
Bi		Pb	(0.001)
C	0.013	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.048	Rh	
Cr	25.9	Ru	
Cu	1.48	S	0.0005
Fe		Sb	
Ga		Se	
Gd		Si	0.39
Ge		Sn	0.003
H		Sr	
Hf		Ta	(0.004)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.099
Li		W	0.106
Mg		Y	
Mn	0.86	Zn	
Mo	3.42	Zr	0.002
N	0.25		

Ag		Na	
Al		Nb	0.026
As		Nd	
Au		Ni	7.48
B	0.0017	O	
Be		P	0.0248
Bi		Pb	
C	0.0206	Pd	
Ca	0.0011	Pr	
Cd		Pt	
Ce		Re	
Co	0.0448	Rh	
Cr	25.49	Ru	
Cu	0.589	S	0.0007
Fe		Sb	
Ga		Se	
Gd		Si	0.285
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0583
Li		W	0.599
Mg		Y	
Mn	0.598	Zn	
Mo	3.49	Zr	
N	0.232		

Ag		Na	
Al	0.01	Nb	0.006
As	(0.004)	Nd	
Au		Ni	6.92
B	0.002	O	0.0025
Be		P	0.024
Bi		Pb	
C	0.015	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.051	Rh	
Cr	25.2	Ru	
Cu	0.51	S	0.0006
Fe		Sb	
Ga		Se	
Gd		Si	0.23
Ge		Sn	0.0055
H		Sr	
Hf		Ta	(0.002)
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.076
Li		W	0.52
Mg		Y	
Mn	0.53	Zn	
Mo	3.56	Zr	0.002
N	0.24		

Ag		Na	
Al	0.017	Nb	0.005
As	(0.0045)	Nd	
Au		Ni	7.1
B	0.002	O	0.003
Be		P	0.026
Bi	(<0.001)	Pb	(<0.003)
C	0.017	Pd	
Ca	(<0.002)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.123	Rh	
Cr	25.5	Ru	
Cu	0.55	S	0.0009
Fe		Sb	(0.001)
Ga		Se	(<0.004)
Gd		Si	0.24
Ge		Sn	0.006
H	(0.001)	Sr	
Hf		Ta	(<0.045)
Hg		Te	
In		Ti	(0.004)
Ir		Tl	
La		V	0.09
Li		W	0.56
Mg	(0.002)	Y	
Mn	0.52	Zn	(<0.005)
Mo	3.61	Zr	(<0.005)
N	0.22		

Ag		Na	
Al	0.015	Nb	0.009
As	(0.005)	Nd	
Au		Ni	0.6
B	0.0006	O	0.004
Be		P	0.023
Bi		Pb	(0.0005)
C	0.07	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.024	Rh	
Cr	17.35	Ru	
Cu	0.085	S	0.004
Fe		Sb	
Ga		Se	(0.001)
Gd		Si	0.83
Ge		Sn	0.006
H		Sr	
Hf		Ta	(0.003)
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.052
Li		W	0.008
Mg	(0.0003)	Y	
Mn	0.4	Zn	(0.004)
Mo	0.075	Zr	(0.001)
N	0.021		

Stainless Steel

Name	IARM-355A
Description	Ferritic Stainless Steel
Grade	AISI 430FS
UNS	S43020

Name	IARM-14A ↓
Description	Ferritic Stainless Steel
Grade	AISI 446
UNS	S44600

Name	IARM-14C
Description	Ferritic Stainless Steel
Grade	AISI 446
UNS	S44600

Name	MBH-13X 42027 A
Description	High Nitrogen Stainless Steel
Grade	AMS 5898
UNS	S42027

Name	MBH-13X NSA9 A ↓
Description	High Nitrogen Stainless Steel
Grade	ASTM A182 Grade F51
UNS	S31803

Ag		Na	
Al	0.0016	Nb	0.0095
As	0.004	Nd	
Au		Ni	0.427
B	0.0011	O	0.01
Be		P	0.0186
Bi		Pb	(0.0002)
C	0.0274	Pd	
Ca	(<0.005)	Pr	
Cd		Pt	
Ce	(<0.005)	Re	
Co	0.047	Rh	
Cr	17.81	Ru	
Cu	0.083	S	0.31
Fe		Sb	(<0.004)
Ga		Se	(0.0001)
Gd		Si	0.435
Ge		Sn	0.005
H		Sr	
Hf		Ta	(0.001)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.038
Li		W	0.018
Mg	(0.0008)	Y	
Mn	0.47	Zn	(0.0007)
Mo	0.337	Zr	(0.002)
N	0.0439		

Ag		Na	
Al	(<0.01)	Nb	(<0.01)
As		Nd	
Au		Ni	0.31
B		O	(0.021)
Be		P	0.023
Bi		Pb	(0.0005)
C	0.089	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.038	Rh	
Cr	23.84	Ru	
Cu	0.06	S	0.004
Fe		Sb	
Ga		Se	
Gd		Si	0.37
Ge		Sn	(0.013)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(<0.01)
Ir		Tl	
La		V	0.045
Li		W	0.014
Mg		Y	
Mn	0.46	Zn	
Mo	0.05	Zr	
N	(0.17)		

Ag		Na	
Al	0.0041	Nb	0.013
As	0.003	Nd	
Au		Ni	0.364
B	0.0005	O	0.006
Be		P	0.021
Bi		Pb	(0.0001)
C	0.061	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.043	Rh	
Cr	24.9	Ru	
Cu	0.19	S	0.0015
Fe		Sb	(0.002)
Ga		Se	(0.0001)
Gd		Si	0.63
Ge		Sn	0.004
H		Sr	
Hf		Ta	(0.002)
Hg		Te	
In		Ti	0.013
Ir		Tl	
La		V	0.078
Li		W	0.031
Mg	(0.0005)	Y	
Mn	0.385	Zn	(0.0003)
Mo	0.101	Zr	(0.001)
N	0.058		

Ag		Na	
Al	0.005	Nb	
As		Nd	
Au		Ni	0.16
B		O	
Be		P	0.014
Bi		Pb	
C	0.3	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.02	Rh	
Cr	15.3	Ru	
Cu	0.035	S	0.0005
Fe		Sb	
Ga		Se	
Gd		Si	0.54
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.05
Li		W	0.02
Mg		Y	
Mn	0.36	Zn	
Mo	0.99	Zr	
N	0.39		

Ag		Na	
Al		Nb	0.012
As		Nd	
Au		Ni	5.44
B		O	
Be		P	0.0248
Bi		Pb	
C	0.019	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.072	Rh	
Cr	22.57	Ru	
Cu	0.24	S	(0.0007)
Fe		Sb	
Ga		Se	
Gd		Si	0.469
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.068
Li		W	0.024
Mg		Y	
Mn	1.592	Zn	
Mo	3.11	Zr	
N	0.156		

Stainless Steel

Name MBH-13X NSA9 B
Description High Nitrogen Stainless Steel
Grade ASTM A182 Grade F51
UNS S31803

Name MBH-13X NSA2 J ↓
Description High Nitrogen Stainless Steel
Grade
UNS

Name MBH-13X NSA4 B
Description High Nitrogen Stainless Steel
Grade
UNS

Name MBH-13X NSB1 D
Description High Nitrogen Stainless Steel
Grade
UNS

Name MBH-13X NSB2 D
Description High Nitrogen Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	0.021
As		Nd	
Au		Ni	5.75
B	0.0018	O	
Be		P	0.0237
Bi		Pb	
C	0.0304	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0337	Rh	
Cr	22.39	Ru	
Cu	0.154	S	0.0009
Fe		Sb	
Ga		Se	
Gd		Si	0.29
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0607
Li		W	0.033
Mg		Y	
Mn	1.524	Zn	
Mo	3.27	Zr	
N	0.184		

Ag		Na	
Al		Nb	0.155
As		Nd	
Au		Ni	10.08
B		O	
Be		P	0.0252
Bi		Pb	
C	0.132	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	17.82	Ru	
Cu	0.259	S	0.0275
Fe		Sb	
Ga		Se	
Gd		Si	0.739
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.139
Li		W	
Mg		Y	
Mn	1.03	Zn	
Mo	2.013	Zr	
N	0.131		

Ag		Na	
Al	0.0048	Nb	0.154
As		Nd	
Au		Ni	17.62
B		O	
Be		P	0.0302
Bi		Pb	
C	0.115	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	23.85	Ru	
Cu	0.595	S	0.0095
Fe		Sb	
Ga		Se	
Gd		Si	0.519
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	5.55	Zn	
Mo	4.32	Zr	
N	0.446		

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	10
B		O	
Be		P	
Bi		Pb	
C	0.17	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	19.1	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	0.58
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.44	Zn	
Mo	0.11	Zr	
N	0.04		

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	11.1
B		O	
Be		P	
Bi		Pb	
C	0.06	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	18.2	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	0.66
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.62	Zn	
Mo	0.21	Zr	(0.001)
N	0.095		

Stainless Steel

Name MBH-13X NSB3 G
Description High Nitrogen Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	9.26
B		O	
Be		P	
Bi		Pb	
C	0.121	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	15.22	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	0.471
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.632	Zn	
Mo	0.63	Zr	
N	0.198		

Name MBH-13X NSC1 P
Description High Nitrogen Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	1.499
As		Nd	
Au		Ni	5.06
B		O	
Be		P	
Bi		Pb	
C	0.316	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	18.76	Ru	
Cu	0.391	S	0.0097
Fe		Sb	
Ga		Se	
Gd		Si	0.788
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.501
Li		W	0.1
Mg		Y	
Mn	6.53	Zn	
Mo	0.196	Zr	
N	0.0877		

Name MBH-13X NSC2 Q
Description High Nitrogen Stainless Steel
Grade
UNS

Ag		Na	
Al	0.37	Nb	2.03
As		Nd	
Au		Ni	3.63
B		O	
Be		P	
Bi		Pb	
C	0.574	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	20.95	Ru	
Cu	1.01	S	0.014
Fe		Sb	
Ga		Se	
Gd		Si	1.02
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.293
Li		W	0.063
Mg		Y	
Mn	8.02	Zn	
Mo	0.339	Zr	
N	0.299		

Name MBH-13X NSC3 AA
Description High Nitrogen Stainless Steel
Grade
UNS

Ag		Na	
Al	0.051	Nb	2.45
As		Nd	
Au		Ni	5
B		O	
Be		P	
Bi		Pb	
C	0.868	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	22.32	Ru	
Cu	0.292	S	0.0295
Fe		Sb	
Ga		Se	
Gd		Si	1.51
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.098
Li		W	
Mg		Y	
Mn	8.43	Zn	
Mo	0.057	Zr	
N	0.498		

Name MBH-13X NSC4 G
Description High Nitrogen Stainless Steel
Grade
UNS

Ag		Na	
Al	0.26	Nb	2.37
As		Nd	
Au		Ni	7.52
B		O	
Be		P	
Bi		Pb	
C	0.47	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.238	Rh	
Cr	31.7	Ru	
Cu	0.208	S	0.0065
Fe		Sb	
Ga		Se	
Gd		Si	1.53
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.224
Li		W	0.208
Mg		Y	
Mn	7.78	Zn	
Mo	1.31	Zr	
N	0.9		

Stainless Steel

Name MBH-13X NSC5 C
Description High Nitrogen Stainless Steel
Grade
UNS

Name MBH-13X NSC6 A
Description High Nitrogen Stainless Steel
Grade
UNS

Name MBH-13X NSC7 B
Description High Nitrogen Stainless Steel
Grade
UNS

Name MBH-13X 64152 A
Description High Strength Alloy Steel
Grade M152
UNS S64152

Name IARM-291A
Description High Strength Alloy Steel
Grade M152
UNS S64152

Ag		Na	
Al	0.24	Nb	2.31
As		Nd	
Au		Ni	4.42
B		O	
Be		P	
Bi		Pb	
C	0.524	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.093	Rh	
Cr	21.6	Ru	
Cu	0.84	S	0.024
Fe		Sb	
Ga		Se	
Gd		Si	1.18
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.102
Li		W	0.05
Mg		Y	
Mn	2.06	Zn	
Mo	0.472	Zr	
N	0.265		

Ag		Na	
Al	(0.009)	Nb	
As		Nd	
Au		Ni	6.52
B		O	
Be		P	0.0049
Bi		Pb	
C	0.0266	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	20.47	Ru	
Cu	0.0064	S	0.0055
Fe		Sb	
Ga		Se	
Gd		Si	0.523
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0052
Li		W	
Mg		Y	
Mn	8.85	Zn	
Mo	(0.002)	Zr	
N	0.235		

Ag		Na	
Al	0.204	Nb	0.83
As		Nd	
Au		Ni	7.5
B		O	
Be		P	0.019
Bi		Pb	
C	0.397	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.297	Rh	
Cr	23.9	Ru	
Cu	0.22	S	0.0098
Fe		Sb	
Ga		Se	
Gd		Si	0.88
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.167
Li		W	0.041
Mg		Y	
Mn	3.55	Zn	
Mo	0.435	Zr	
N	0.429		

Ag		Na	
Al	0.0315	Nb	
As		Nd	
Au		Ni	2.5
B		O	
Be		P	0.0123
Bi		Pb	
C	0.114	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0185	Rh	
Cr	11.34	Ru	
Cu	0.0622	S	0.002
Fe		Sb	
Ga		Se	
Gd		Si	0.224
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.275
Li		W	
Mg		Y	
Mn	0.666	Zn	
Mo	1.567	Zr	
N	0.0339		

Ag		Na	
Al	(0.004)	Nb	0.022
As	(0.005)	Nd	
Au		Ni	2.62
B	0.001	O	0.014
Be		P	0.016
Bi		Pb	
C	0.11	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.021	Rh	
Cr	11.3	Ru	
Cu	0.06	S	0.009
Fe		Sb	
Ga		Se	
Gd		Si	0.23
Ge		Sn	0.004
H		Sr	
Hf		Ta	(0.001)
Hg		Te	
In		Ti	0.0011
Ir		Tl	
La		V	0.29
Li		W	(0.01)
Mg		Y	
Mn	0.71	Zn	
Mo	1.61	Zr	(<0.005)
N	0.035		

Stainless Steel

Name MBH-13X 66286 A ↓
Description Iron Base Superalloy
Grade A286
UNS S66286

Name IARM-26D
Description Iron Base Superalloy
Grade A286
UNS S66286

Name IARM-98A ↓
Description Iron-Nickel-Cobalt Sealing Alloy
Grade ASTM F15, Kovar
UNS K94610

Name IARM-98B ↓
Description Iron-Nickel-Cobalt Sealing Alloy
Grade ASTM F15, Kovar
UNS K94610

Name IARM-FeKovar-18
Description Iron-Nickel-Cobalt Sealing Alloy
Grade ASTM F15, Kovar
UNS K94610

Ag		Na	
Al	0.193	Nb	
As		Nd	
Au		Ni	25.21
B	0.0044	O	
Be		P	0.0172
Bi		Pb	
C	0.035	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.083	Rh	
Cr	14.99	Ru	
Cu	0.195	S	(0.0006)
Fe		Sb	
Ga		Se	
Gd		Si	0.216
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	1.92
Ir		Tl	
La		V	0.262
Li		W	0.098
Mg		Y	
Mn	1.173	Zn	
Mo	1.185	Zr	
N	0.004		

Ag		Na	
Al	0.29	Nb	0.007
As	(0.003)	Nd	
Au		Ni	24.6
B	0.0063	O	(0.001)
Be		P	0.013
Bi		Pb	(<0.03)
C	0.038	Pd	
Ca	(<0.0005)	Pr	
Cd		Pt	
Ce	(<0.015)	Re	
Co	0.04	Rh	
Cr	14.29	Ru	
Cu	0.047	S	0.0008
Fe		Sb	(<0.004)
Ga		Se	(<0.03)
Gd		Si	0.05
Ge		Sn	0.0039
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	2.17
Ir		Tl	
La		V	0.223
Li		W	0.036
Mg	(<0.005)	Y	
Mn	0.224	Zn	(<0.02)
Mo	1.23	Zr	(0.0016)
N	0.0035		

Ag		Na	
Al	0.04	Nb	(<0.01)
As		Nd	
Au		Ni	29.09
B		O	
Be		P	0.002
Bi		Pb	
C	0.019	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	17.5	Rh	
Cr	0.12	Ru	
Cu	0.05	S	0.002
Fe		Sb	
Ga		Se	
Gd		Si	0.1
Ge		Sn	(<0.01)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(<0.01)
Ir		Tl	
La		V	(<0.01)
Li		W	0.03
Mg		Y	
Mn	0.24	Zn	
Mo	0.05	Zr	(<0.01)
N			

Ag		Na	
Al	0.07	Nb	0.002
As	(<0.002)	Nd	
Au		Ni	29.4
B	0.001	O	0.0021
Be		P	0.002
Bi		Pb	(<0.0005)
C	0.007	Pd	
Ca	(<0.0005)	Pr	
Cd		Pt	
Ce		Re	
Co	17	Rh	
Cr	0.012	Ru	
Cu	0.028	S	0.0007
Fe		Sb	
Ga		Se	
Gd		Si	0.17
Ge		Sn	0.002
H		Sr	
Hf		Ta	(<0.05)
Hg		Te	
In		Ti	0.03
Ir		Tl	
La		V	(0.003)
Li		W	(0.02)
Mg	0.004	Y	
Mn	0.18	Zn	(<0.0005)
Mo	0.01	Zr	(<0.01)
N	0.0024		

Ag		Na	
Al	(<0.006)	Nb	(<0.005)
As	(0.003)	Nd	
Au		Ni	29
B	(<0.005)	O	(<0.008)
Be		P	0.004
Bi	(<0.005)	Pb	(<0.005)
C	0.024	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	17.3	Rh	
Cr	0.068	Ru	
Cu	0.077	S	0.0055
Fe	53.3	Sb	(<0.005)
Ga		Se	(<0.005)
Gd		Si	0.09
Ge		Sn	0.0021
H	(<0.001)	Sr	
Hf	(<0.001)	Ta	(<0.005)
Hg		Te	
In		Ti	(<0.005)
Ir		Tl	
La		V	(<0.005)
Li		W	0.02
Mg	(<0.01)	Y	(<0.001)
Mn	0.26	Zn	(<0.005)
Mo	0.062	Zr	(<0.005)
N	(<0.002)		

Stainless Steel

Name IARM-308A ↓
Description Maraging Steel
Grade Alloy C-250
UNS K92890

Name IARM-99B ↓
Description Maraging Steel
Grade Alloy C-300
UNS K93120

Name IARM-99D
Description Maraging Steel
Grade Alloy C-300
UNS K93120

Name IARM-309A
Description Maraging Steel
Grade Alloy C-350
UNS K93540

Name MBH-13X 14935 T
Description Maraging Steel
Grade
UNS

Ag		Na	
Al	0.097	Nb	0.003
As	(0.003)	Nd	
Au		Ni	18.53
B	0.0029	O	0.0005
Be		P	0.004
Bi		Pb	
C	0.003	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	7.8	Rh	
Cr	0.023	Ru	
Cu	0.018	S	0.0005
Fe		Sb	
Ga		Se	
Gd		Si	0.014
Ge		Sn	0.001
H		Sr	
Hf		Ta	(<0.01)
Hg		Te	
In		Ti	0.46
Ir		Tl	
La		V	0.01
Li		W	0.01
Mg		Y	
Mn	0.019	Zn	
Mo	4.78	Zr	0.01
N	0.0013		

Ag		Na	
Al	0.095	Nb	(0.005)
As		Nd	
Au		Ni	18.46
B	0.0026	O	0.0015
Be		P	0.005
Bi		Pb	
C	0.005	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	9.24	Rh	
Cr	0.081	Ru	
Cu	0.094	S	0.0005
Fe		Sb	
Ga		Se	
Gd		Si	0.022
Ge		Sn	(0.003)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.74
Ir		Tl	
La		V	0.012
Li		W	0.016
Mg		Y	
Mn	0.036	Zn	
Mo	4.88	Zr	(<0.01)
N	0.0011		

Ag		Na	
Al	0.117	Nb	0.011
As	(<0.002)	Nd	
Au		Ni	18.4
B	0.0026	O	(<0.003)
Be		P	0.004
Bi		Pb	(0.01)
C	0.006	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	9.24	Rh	
Cr	0.12	Ru	
Cu	0.045	S	0.0011
Fe		Sb	(<0.004)
Ga		Se	
Gd		Si	0.03
Ge		Sn	(0.002)
H		Sr	
Hf		Ta	(<0.032)
Hg		Te	
In		Ti	0.67
Ir		Tl	
La		V	0.037
Li		W	0.01
Mg	(<0.005)	Y	
Mn	0.013	Zn	(<0.002)
Mo	4.8	Zr	(0.008)
N	0.0014		

Ag		Na	
Al	0.11	Nb	0.004
As	(0.004)	Nd	
Au		Ni	18.4
B	0.0032	O	0.0005
Be		P	0.004
Bi		Pb	
C	0.0059	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	12.3	Rh	
Cr	0.053	Ru	
Cu	0.023	S	0.0006
Fe		Sb	
Ga		Se	
Gd		Si	0.02
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	(0.006)
Hg		Te	
In		Ti	1.47
Ir		Tl	
La		V	0.01
Li		W	0.01
Mg		Y	
Mn	0.018	Zn	
Mo	4.71	Zr	0.008
N	0.001		

Ag		Na	
Al	(0.007)	Nb	
As		Nd	
Au		Ni	18.96
B		O	
Be		P	0.036
Bi		Pb	
C	0.0105	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	7.17	Rh	
Cr	0.745	Ru	
Cu		S	0.055
Fe		Sb	
Ga		Se	
Gd		Si	0.441
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.106
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.494	Zn	
Mo	5.61	Zr	
N	0.0102		

Stainless Steel

Name	IARM-242A		
Description	Martensitic Stainless Steel		
Grade	Aermet 100		
UNS	K92580		

Name	IARM-FeA100-18		
Description	Martensitic Stainless Steel		
Grade	Aermet 100		
UNS	K92580		

Name	IARM-9B ↓		
Description	Martensitic Stainless Steel		
Grade	AISI 410		
UNS	S41000		

Name	IARM-9D ↓		
Description	Martensitic Stainless Steel		
Grade	AISI 410		
UNS	S41000		

Name	IARM-Fe410-18		
Description	Martensitic Stainless Steel		
Grade	AISI 410		
UNS	S41000		

Ag		Na	
Al	0.004	Nb	0.004
As		Nd	
Au		Ni	11.1
B	(0.0005)	O	0.0006
Be		P	0.002
Bi		Pb	
C	0.24	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	13.5	Rh	
Cr	3	Ru	
Cu	0.007	S	0.0004
Fe		Sb	
Ga		Se	
Gd		Si	0.02
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	0.008
Hg		Te	
In		Ti	0.009
Ir		Tl	
La		V	0.01
Li		W	(<0.01)
Mg		Y	
Mn	0.018	Zn	
Mo	1.21	Zr	(0.002)
N	0.0003		

Ag		Na	
Al	0.007	Nb	0.003
As		Nd	
Au		Ni	11.2
B		O	0.0009
Be		P	0.004
Bi		Pb	
C	0.222	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	13.4	Rh	
Cr	2.98	Ru	
Cu	0.01	S	
Fe		Sb	
Ga		Se	
Gd		Si	0.039
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.008
Ir		Tl	
La		V	0.007
Li		W	0.006
Mg		Y	
Mn	0.013	Zn	
Mo	1.19	Zr	
N	0.001		

Ag		Na	
Al	0.024	Nb	0.028
As		Nd	
Au		Ni	0.3
B		O	0.0019
Be		P	0.019
Bi		Pb	
C	0.13	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.016	Rh	
Cr	11.97	Ru	
Cu	0.054	S	0.006
Fe		Sb	
Ga		Se	
Gd		Si	0.29
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	0.048
Li		W	0.01
Mg		Y	
Mn	0.54	Zn	
Mo	0.064	Zr	
N	0.0468		

Ag		Na	
Al	0.003	Nb	0.0023
As	0.003	Nd	
Au		Ni	0.2
B	0.0005	O	0.0053
Be		P	0.033
Bi		Pb	(0.0002)
C	0.143	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.0213	Rh	
Cr	12.51	Ru	
Cu	0.11	S	0.028
Fe		Sb	
Ga		Se	(0.0001)
Gd		Si	0.38
Ge		Sn	0.006
H		Sr	
Hf		Ta	0.004
Hg		Te	
In		Ti	0.0016
Ir		Tl	
La		V	0.022
Li		W	0.004
Mg	(0.0004)	Y	
Mn	0.57	Zn	(0.0001)
Mo	0.038	Zr	(0.001)
N	0.0225		

Ag		Na	
Al	0.003	Nb	0.0021
As	(0.0032)	Nd	
Au		Ni	0.28
B	(<0.005)	O	0.009
Be		P	0.017
Bi	(<0.005)	Pb	(<0.001)
C	0.132	Pd	
Ca	(<0.007)	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.012	Rh	
Cr	12.2	Ru	
Cu	0.046	S	0.0014
Fe		Sb	(<0.008)
Ga		Se	(<0.005)
Gd		Si	0.29
Ge		Sn	(0.004)
H	(<0.0004)	Sr	
Hf		Ta	(<0.013)
Hg		Te	
In		Ti	(0.002)
Ir		Tl	
La		V	0.065
Li		W	0.008
Mg	(<0.005)	Y	
Mn	0.5	Zn	(<0.005)
Mo	0.146	Zr	(<0.005)
N	0.046		

Stainless Steel

Name	IARM-327A ↓
Description	Martensitic Stainless Steel
Grade	AISI 415
UNS	S41500

Name	IARM-10D
Description	Martensitic Stainless Steel
Grade	AISI 416
UNS	S41600

Name	IARM-154A ↓
Description	Martensitic Stainless Steel
Grade	AISI 420
UNS	S42000

Name	IARM-154B ↓
Description	Martensitic Stainless Steel
Grade	AISI 420
UNS	S42000

Name	IARM-154C
Description	Martensitic Stainless Steel
Grade	AISI 420
UNS	S42000

Ag		Na	
Al	0.003	Nb	0.008
As	(0.004)	Nd	
Au		Ni	3.83
B	0.001	O	0.0047
Be		P	0.018
Bi		Pb	(0.0001)
C	0.018	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.019	Rh	
Cr	12.73	Ru	
Cu	0.082	S	0.001
Fe		Sb	
Ga		Se	
Gd		Si	0.43
Ge		Sn	0.006
H		Sr	
Hf		Ta	(0.004)
Hg		Te	
In		Ti	0.0026
Ir		Tl	
La		V	0.036
Li		W	0.009
Mg	(0.0003)	Y	
Mn	0.54	Zn	
Mo	0.53	Zr	(0.002)
N	0.0157		

Ag		Na	
Al	0.0027	Nb	0.0027
As	0.007	Nd	
Au		Ni	0.291
B	0.002	O	0.005
Be		P	0.0178
Bi		Pb	(0.0003)
C	0.11	Pd	
Ca	(0.0011)	Pr	
Cd		Pt	
Ce		Re	
Co	0.0187	Rh	
Cr	12.42	Ru	
Cu	0.192	S	0.334
Fe		Sb	(0.0022)
Ga		Se	(<0.02)
Gd		Si	0.475
Ge		Sn	0.01
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.051
Li		W	0.005
Mg	(<0.09)	Y	
Mn	1.11	Zn	(0.006)
Mo	0.148	Zr	(<0.005)
N	0.0241		

Ag		Na	
Al	0.008	Nb	0.004
As		Nd	
Au		Ni	0.19
B		O	(0.0068)
Be		P	0.018
Bi		Pb	
C	0.39	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.021	Rh	
Cr	12.82	Ru	
Cu	0.044	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.35
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.045
Li		W	0.011
Mg		Y	
Mn	0.47	Zn	
Mo	0.052	Zr	
N	0.0294		

Ag		Na	
Al	0.002	Nb	0.003
As		Nd	
Au		Ni	0.223
B	(0.001)	O	0.0016
Be		P	0.017
Bi		Pb	
C	0.35	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.02	Rh	
Cr	12.2	Ru	
Cu	0.087	S	0.0004
Fe		Sb	
Ga		Se	
Gd		Si	0.45
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.067
Li		W	0.01
Mg		Y	
Mn	0.405	Zn	
Mo	0.079	Zr	
N	0.02		

Ag		Na	
Al	0.0034	Nb	0.014
As	(0.004)	Nd	
Au		Ni	0.215
B	0.0007	O	0.0042
Be		P	0.0174
Bi		Pb	(<0.01)
C	0.339	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.016	Rh	
Cr	12.41	Ru	
Cu	0.12	S	0.0043
Fe		Sb	(0.001)
Ga		Se	(0.0003)
Gd		Si	0.37
Ge		Sn	0.0058
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.043
Li		W	0.005
Mg	(<0.001)	Y	
Mn	0.423	Zn	(<0.005)
Mo	0.036	Zr	(0.0014)
N	0.054		

Stainless Steel

Name	IARM-352A
Description	Martensitic Stainless Steel
Grade	AISI 420FS
UNS	S42020

Name	IARM-205D
Description	Martensitic Stainless Steel
Grade	AISI 422
UNS	S42200

Name	IARM-12A ↓
Description	Martensitic Stainless Steel
Grade	AISI 431
UNS	S43100

Name	IARM-12B ↓
Description	Martensitic Stainless Steel
Grade	AISI 431
UNS	S43100

Name	IARM-12C
Description	Martensitic Stainless Steel
Grade	AISI 431
UNS	S43100

Ag		Na	
Al	0.0025	Nb	0.012
As	0.005	Nd	
Au		Ni	0.269
B	0.0007	O	0.005
Be		P	0.0182
Bi		Pb	(<0.001)
C	0.341	Pd	
Ca	(<0.005)	Pr	
Cd		Pt	
Ce	(<0.005)	Re	
Co	0.016	Rh	
Cr	13.11	Ru	
Cu	0.148	S	0.21
Fe		Sb	(0.004)
Ga		Se	(0.006)
Gd		Si	0.357
Ge		Sn	0.0046
H		Sr	
Hf		Ta	(0.0007)
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.028
Li		W	0.005
Mg	(<0.009)	Y	
Mn	1.13	Zn	(<0.02)
Mo	0.38	Zr	(<0.003)
N	0.029		

Ag		Na	
Al	0.0021	Nb	0.013
As	0.004	Nd	
Au		Ni	0.841
B	0.0007	O	0.0053
Be		P	0.0209
Bi		Pb	0.002
C	0.232	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce	(<0.0010)	Re	
Co	0.043	Rh	
Cr	12.18	Ru	
Cu	0.122	S	0.0028
Fe		Sb	(<0.0070)
Ga		Se	(<0.0050)
Gd		Si	0.257
Ge		Sn	0.0047
H		Sr	
Hf		Ta	(<0.0050)
Hg		Te	
In		Ti	0.0022
Ir		Tl	
La		V	0.319
Li		W	1.07
Mg	(0.0007)	Y	
Mn	0.736	Zn	(<0.0050)
Mo	1.002	Zr	0.0022
N	0.0484		

Ag		Na	
Al	(0.076)	Nb	0.04
As		Nd	
Au		Ni	2.27
B		O	(0.02)
Be		P	0.024
Bi		Pb	
C	0.14	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.03	Rh	
Cr	16.03	Ru	
Cu	0.1	S	0.006
Fe		Sb	
Ga		Se	
Gd		Si	0.37
Ge		Sn	(0.007)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.07
Li		W	0.024
Mg		Y	
Mn	0.61	Zn	
Mo	0.07	Zr	
N	(0.057)		

Ag		Na	
Al	(0.003)	Nb	0.011
As		Nd	
Au		Ni	2.15
B	(0.0003)	O	0.0101
Be		P	0.016
Bi		Pb	(<0.0005)
C	0.174	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.018	Rh	
Cr	16.02	Ru	
Cu	0.143	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.56
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.037
Li		W	0.014
Mg		Y	
Mn	0.6	Zn	
Mo	0.057	Zr	(0.002)
N	2.15		

Ag		Na	
Al	0.004	Nb	0.02
As	0.004	Nd	
Au		Ni	2.23
B	0.0004	O	0.005
Be		P	0.022
Bi		Pb	(0.0005)
C	0.155	Pd	
Ca	0.0007	Pr	
Cd		Pt	
Ce		Re	
Co	0.048	Rh	
Cr	15.78	Ru	
Cu	0.33	S	0.0032
Fe		Sb	
Ga		Se	
Gd		Si	0.34
Ge		Sn	0.008
H		Sr	
Hf		Ta	(0.0005)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.04
Li		W	0.015
Mg	(0.0002)	Y	
Mn	0.55	Zn	
Mo	0.125	Zr	(0.001)
N	0.056		

Stainless Steel

Name	IARM-13D
Description	Martensitic Stainless Steel
Grade	AISI 440C
UNS	S44004

Name	IARM-353A
Description	Martensitic Stainless Steel
Grade	AISI 440F Se
UNS	S44023

Name	IARM-20C ↓
Description	Martensitic Stainless Steel
Grade	Greek Ascology
UNS	S41800

Name	IARM-Fe418-18
Description	Martensitic Stainless Steel
Grade	Greek Ascology
UNS	S41800

Name	MBH-13X 12547 M
Description	Martensitic Stainless Steel
Grade	
UNS	

Ag		Na	
Al	0.006	Nb	0.0074
As	0.008	Nd	
Au		Ni	0.256
B	0.0005	O	0.0031
Be		P	0.0195
Bi		Pb	(<0.0090)
C	1.04	Pd	
Ca	(0.0007)	Pr	
Cd		Pt	
Ce		Re	
Co	0.0212	Rh	
Cr	16.36	Ru	
Cu	0.184	S	0.0012
Fe		Sb	0.0027
Ga		Se	(<0.02)
Gd		Si	0.614
Ge		Sn	0.011
H		Sr	
Hf		Ta	0.004
Hg		Te	
In		Ti	0.0035
Ir		Tl	
La		V	0.058
Li		W	0.046
Mg		Y	
Mn	0.697	Zn	(<0.02)
Mo	0.488	Zr	0.0017
N	0.0492		

Ag		Na	
Al	0.0018	Nb	0.011
As	0.004	Nd	
Au		Ni	0.265
B	0.0006	O	0.005
Be		P	0.019
Bi		Pb	(0.002)
C	0.98	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce	(<0.005)	Re	
Co	0.032	Rh	
Cr	17.01	Ru	
Cu	0.13	S	0.025
Fe		Sb	(0.002)
Ga		Se	0.17
Gd		Si	0.49
Ge		Sn	0.0056
H		Sr	
Hf		Ta	0.004
Hg		Te	
In		Ti	0.0015
Ir		Tl	
La		V	0.116
Li		W	0.041
Mg	(0.004)	Y	
Mn	0.95	Zn	(0.005)
Mo	0.5	Zr	0.002
N	0.027		

Ag		Na	
Al	(0.004)	Nb	0.01
As		Nd	
Au		Ni	1.93
B		O	0.0068
Be		P	0.018
Bi		Pb	
C	0.18	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.031	Rh	
Cr	12.15	Ru	
Cu	0.06	S	0.007
Fe		Sb	
Ga		Se	
Gd		Si	0.35
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.003)
Ir		Tl	
La		V	0.086
Li		W	2.59
Mg		Y	
Mn	0.3	Zn	
Mo	0.12	Zr	
N	0.0222		

Ag		Na	
Al	0.004	Nb	0.019
As	(0.003)	Nd	
Au		Ni	2
B	(<0.005)	O	0.004
Be		P	0.016
Bi	(<0.005)	Pb	(<0.005)
C	0.168	Pd	
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.029	Rh	
Cr	12.4	Ru	
Cu	0.222	S	(0.0005)
Fe		Sb	(<0.05)
Ga		Se	(<0.005)
Gd		Si	0.32
Ge		Sn	0.005
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	(0.004)
Ir		Tl	
La		V	0.046
Li		W	2.63
Mg	(<0.005)	Y	
Mn	0.429	Zn	(<0.005)
Mo	0.104	Zr	(<0.005)
N	0.031		

Ag		Na	
Al		Nb	0.347
As		Nd	
Au		Ni	1.492
B		O	
Be		P	0.0441
Bi		Pb	
C	0.238	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.302	Rh	
Cr	17.49	Ru	
Cu	0.531	S	0.0746
Fe		Sb	
Ga		Se	
Gd		Si	0.344
Ge		Sn	0.03
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.1021
Li		W	
Mg		Y	
Mn	1.191	Zn	
Mo	1.006	Zr	
N	0.099		

Stainless Steel

Name MBH-13X 12549 L
Description Martensitic Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	0.19
As		Nd	
Au		Ni	1.203
B		O	
Be		P	0.0052
Bi		Pb	
C	0.1025	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.492	Rh	
Cr	12.01	Ru	
Cu	0.492	S	0.124
Fe		Sb	
Ga		Se	
Gd		Si	0.344
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0144
Li		W	
Mg		Y	
Mn	0.354	Zn	
Mo	1.311	Zr	
N	0.0393		

Name MBH-13X 14122 A
Description Martensitic Stainless Steel
Grade
UNS

Ag		Na	
Al	(0.002)	Nb	0.006
As		Nd	
Au		Ni	0.632
B		O	
Be		P	0.0177
Bi		Pb	
C	0.356	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0224	Rh	
Cr	15.91	Ru	
Cu	0.066	S	0.0021
Fe		Sb	
Ga		Se	
Gd		Si	0.449
Ge		Sn	0.0041
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.101
Li		W	0.004
Mg		Y	
Mn	0.48	Zn	
Mo	0.855	Zr	
N	0.029		

Name MBH-13X 14418 A
Description Martensitic Stainless Steel
Grade
UNS

Ag		Na	
Al	(0.003)	Nb	(0.009)
As		Nd	
Au		Ni	4.65
B		O	
Be		P	0.0265
Bi		Pb	
C	0.045	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.1004	Rh	
Cr	15.44	Ru	
Cu	0.173	S	0.0108
Fe		Sb	
Ga		Se	
Gd		Si	0.291
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0539
Li		W	0.013
Mg		Y	
Mn	0.819	Zn	
Mo	0.847	Zr	
N	0.0423		

Name MBH-13X 14713 A
Description Martensitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.551	Nb	
As		Nd	
Au		Ni	0.122
B		O	
Be		P	0.0203
Bi		Pb	
C	0.0446	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	7.17	Ru	
Cu	0.0368	S	0.008
Fe		Sb	
Ga		Se	
Gd		Si	0.911
Ge		Sn	0.0034
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0056
Ir		Tl	
La		V	0.0411
Li		W	
Mg	0.0016	Y	
Mn	0.495	Zn	
Mo	0.0266	Zr	
N	0.0065		

Name MBH-13X 14775 S
Description Martensitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0301	Nb	0.691
As	(0.002)	Nd	
Au		Ni	1.949
B		O	
Be		P	0.047
Bi		Pb	
C	0.006	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.153	Rh	
Cr	17.78	Ru	
Cu	0.167	S	0.154
Fe		Sb	
Ga		Se	
Gd		Si	0.552
Ge		Sn	0.0007
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0287
Li		W	
Mg		Y	
Mn	1.405	Zn	
Mo	0.529	Zr	
N			

Stainless Steel

Name MBH-13X 14923 A
Description Martensitic Stainless Steel
Grade
UNS

Name MBH-13X 15023 W
Description Martensitic Stainless Steel
Grade
UNS

Name MBH-13X 15024 X
Description Martensitic Stainless Steel
Grade
UNS

Name MBH-13X 15059 P
Description Martensitic Stainless Steel
Grade
UNS

Name MBH-13X 40930 A
Description Martensitic Stainless Steel
Grade
UNS

Ag		Na	
Al	0.003	Nb	0.005
As		Nd	
Au		Ni	0.452
B		O	
Be		P	0.0197
Bi		Pb	
C	0.205	Pd	
Ca	0.0044	Pr	
Cd		Pt	
Ce		Re	
Co	0.0207	Rh	
Cr	11.26	Ru	
Cu	0.0563	S	0.0031
Fe		Sb	
Ga		Se	
Gd		Si	0.33
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.295
Li		W	
Mg		Y	
Mn	0.501	Zn	
Mo	0.819	Zr	
N	0.0321		

Ag		Na	
Al	(0.004)	Nb	1.44
As		Nd	
Au		Ni	0.947
B		O	
Be		P	0.0078
Bi		Pb	
C	0.089	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0501	Rh	
Cr	11.05	Ru	
Cu	0.0312	S	0.0053
Fe		Sb	
Ga		Se	
Gd		Si	0.34
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0308
Li		W	0.0396
Mg		Y	
Mn	1.75	Zn	
Mo	0.961	Zr	
N	0.0081		

Ag		Na	
Al	0.0049	Nb	0.099
As		Nd	
Au		Ni	2.99
B		O	
Be		P	0.0284
Bi		Pb	
C	0.166	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.1059	Rh	
Cr	14.65	Ru	
Cu	0.332	S	0.0294
Fe		Sb	
Ga		Se	
Gd		Si	0.749
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.15
Li		W	0.039
Mg		Y	
Mn	0.61	Zn	
Mo	0.299	Zr	
N	0.0156		

Ag		Na	
Al		Nb	0.43
As		Nd	
Au		Ni	1.584
B		O	
Be		P	0.013
Bi		Pb	
C	0.084	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.266	Rh	
Cr	15.85	Ru	
Cu	0.105	S	0.0133
Fe		Sb	
Ga		Se	
Gd		Si	0.495
Ge		Sn	(0.02)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.038
Ir		Tl	
La		V	0.07
Li		W	0.081
Mg		Y	
Mn	0.995	Zn	
Mo	0.6	Zr	
N			

Ag		Na	
Al	0.0362	Nb	0.051
As		Nd	
Au		Ni	0.301
B		O	
Be		P	0.0104
Bi		Pb	
C	0.0227	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0241	Rh	
Cr	11.09	Ru	
Cu	0.222	S	0.0046
Fe		Sb	
Ga		Se	
Gd		Si	0.689
Ge		Sn	0.0069
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.434
Ir		Tl	
La		V	0.0339
Li		W	
Mg		Y	
Mn	0.707	Zn	
Mo	0.0328	Zr	
N	0.0075		

Stainless Steel

Name MBH-13X 41001 A

Description Martensitic Stainless Steel

Grade

UNS

Ag		Na	
Al	(0.004)	Nb	
As		Nd	
Au		Ni	0.0939
B		O	
Be		P	0.0142
Bi		Pb	
C	0.136	Pd	
Ca	0.001	Pr	
Cd		Pt	
Ce		Re	
Co	0.0143	Rh	
Cr	12.06	Ru	
Cu	0.056	S	0.0037
Fe		Sb	
Ga		Se	
Gd		Si	0.298
Ge		Sn	0.0051
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.079
Li		W	
Mg		Y	
Mn	0.464	Zn	
Mo	0.0102	Zr	
N	0.0316		

Name MBH-13X 41008 A

Description Martensitic Stainless Steel

Grade

UNS

Ag		Na	
Al	0.076	Nb	0.0202
As		Nd	
Au		Ni	0.319
B		O	
Be		P	0.0105
Bi		Pb	
C	0.0292	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0491	Rh	
Cr	12.39	Ru	
Cu	0.0915	S	0.0048
Fe		Sb	
Ga		Se	
Gd		Si	0.641
Ge		Sn	0.0077
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0569
Li		W	
Mg		Y	
Mn	0.711	Zn	
Mo	0.0365	Zr	0.007
N	0.0131		

Name MBH-13X 41008 B

Description Martensitic Stainless Steel

Grade

UNS

Ag		Na	
Al	0.029	Nb	0.019
As		Nd	
Au		Ni	0.33
B		O	
Be		P	0.013
Bi		Pb	
C	0.035	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.053	Rh	
Cr	12.4	Ru	
Cu	0.26	S	0.0072
Fe		Sb	
Ga		Se	
Gd		Si	0.72
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.059
Li		W	
Mg		Y	
Mn	0.68	Zn	
Mo	0.041	Zr	0.049
N	0.009		

Name MBH-13X 41600 A

Description Martensitic Stainless Steel

Grade

UNS

Ag		Na	
Al	(0.004)	Nb	0.0053
As		Nd	
Au		Ni	0.331
B		O	
Be		P	0.0253
Bi		Pb	
C	0.111	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0216	Rh	
Cr	13.23	Ru	
Cu	0.16	S	0.302
Fe		Sb	
Ga		Se	
Gd		Si	0.442
Ge		Sn	0.0066
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0888
Li		W	(0.003)
Mg		Y	
Mn	0.627	Zn	
Mo	0.0499	Zr	
N	0.0245		

Name MBH-13X 42200 A

Description Martensitic Stainless Steel

Grade

UNS

Ag		Na	
Al	0.002	Nb	0.0203
As		Nd	
Au		Ni	0.738
B		O	
Be		P	0.0182
Bi		Pb	
C	0.22	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0114	Rh	
Cr	11.41	Ru	
Cu	0.136	S	0.0012
Fe		Sb	
Ga		Se	
Gd		Si	0.314
Ge		Sn	0.0052
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.246
Li		W	1.177
Mg		Y	
Mn	0.651	Zn	
Mo	1.042	Zr	
N	0.0585		

Stainless Steel

Name MBH-13X 43020 A
Description Martensitic Stainless Steel
Grade
UNS

Name MBH-13X 43100 A
Description Martensitic Stainless Steel
Grade
UNS

Name MBH-13X 44004 B
Description Martensitic Stainless Steel
Grade
UNS

Name MBH-13X 90901 A
Description Martensitic Stainless Steel
Grade
UNS

Name IARM-214A ↓
Description Non Magnetic Stainless Steel
Grade NMS-100
UNS

Ag		Na	
Al	0.0047	Nb	0.0102
As		Nd	
Au		Ni	0.517
B	(0.003)	O	
Be		P	0.0246
Bi		Pb	
C	0.147	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0191	Rh	
Cr	16.07	Ru	
Cu	0.0687	S	0.189
Fe		Sb	
Ga		Se	
Gd		Si	0.415
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0542
Li		W	0.0108
Mg		Y	
Mn	1.439	Zn	
Mo	0.226	Zr	
N	0.0212		

Ag		Na	
Al		Nb	0.006
As		Nd	
Au		Ni	2.1
B		O	
Be		P	0.0199
Bi		Pb	
C	0.166	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0239	Rh	
Cr	16.39	Ru	
Cu	0.134	S	0.005
Fe		Sb	
Ga		Se	
Gd		Si	0.535
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0577
Li		W	0.004
Mg		Y	
Mn	0.378	Zn	
Mo	0.0768	Zr	
N	0.075		

Ag		Na	
Al	0.016	Nb	0.008
As		Nd	
Au		Ni	0.197
B		O	
Be		P	0.0232
Bi		Pb	
C	1.012	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0167	Rh	
Cr	16.5	Ru	
Cu	0.0687	S	0.0018
Fe		Sb	
Ga		Se	
Gd		Si	0.44
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.004)
Ir		Tl	
La		V	0.0484
Li		W	0.0156
Mg		Y	
Mn	0.378	Zn	
Mo	0.468	Zr	
N	0.0308		

Ag		Na	
Al	0.0216	Nb	0.0704
As		Nd	
Au		Ni	0.249
B		O	
Be		P	0.0148
Bi		Pb	
C	0.102	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	8.43	Ru	
Cu	0.0399	S	0.0009
Fe		Sb	
Ga		Se	
Gd		Si	0.429
Ge		Sn	0.002
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.003)
Ir		Tl	
La		V	0.208
Li		W	0.0094
Mg		Y	
Mn	0.447	Zn	
Mo	0.905	Zr	
N	0.0472		

Ag		Na	
Al	(0.002)	Nb	0.23
As		Nd	
Au		Ni	2.33
B	(0.001)	O	0.0026
Be		P	0.033
Bi		Pb	
C	0.018	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.021	Rh	
Cr	12.36	Ru	
Cu	0.36	S	0.002
Fe		Sb	
Ga		Se	
Gd		Si	1
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.04
Li		W	0.02
Mg		Y	
Mn	18.3	Zn	
Mo	0.44	Zr	
N	0.27		

Stainless Steel

Name MBH-13X PH17400 A ↓
Description Precipitation Hardenable Stainless Steel
Grade AISI 17-4 PH
UNS S17400

Name IARM-Fe174PH-18
Description Precipitation Hardenable Stainless Steel
Grade AISI 17-4PH
UNS S17400

Name MBH-13X PH17700 A
Description Precipitation Hardenable Stainless Steel
Grade AISI 17-7 PH
UNS S17700

Name IARM-152C ↓
Description Precipitation Hardenable Stainless Steel
Grade AISI 17-7 PH
UNS S17700

Name IARM-Fe177PH-18
Description Precipitation Hardenable Stainless Steel
Grade AISI 17-7 PH
UNS S17700

Ag		Na	
Al		Nb	0.184
As		Nd	
Au		Ni	4.52
B		O	
Be		P	0.0202
Bi		Pb	
C	0.02	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0411	Rh	
Cr	15.74	Ru	
Cu	3.09	S	0.0215
Fe		Sb	
Ga		Se	
Gd		Si	0.349
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.112
Li		W	
Mg		Y	
Mn	0.829	Zn	
Mo	0.061	Zr	
N	0.0342		

Ag		Na	
Al	0.007	Nb	0.285
As	(<0.01)	Nd	
Au		Ni	4.73
B	(<0.005)	O	0.0035
Be		P	0.024
Bi	(<0.006)	Pb	(<0.005)
C	0.041	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.047	Rh	
Cr	15.1	Ru	
Cu	3.33	S	(<0.004)
Fe	(75.1)	Sb	(<0.01)
Ga		Se	(<0.005)
Gd		Si	0.52
Ge		Sn	0.008
H	(<0.001)	Sr	
Hf	(<0.001)	Ta	(0.0003)
Hg		Te	
In		Ti	(<0.006)
Ir		Tl	
La		V	0.051
Li		W	0.015
Mg	(<0.006)	Y	(<0.001)
Mn	0.47	Zn	(<0.005)
Mo	0.315	Zr	(<0.003)
N	0.0436		

Ag		Na	
Al	1.172	Nb	0.0201
As		Nd	
Au		Ni	6.98
B	0.0033	O	
Be		P	0.0181
Bi		Pb	
C	0.0732	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0464	Rh	
Cr	16.88	Ru	
Cu	0.146	S	0.0008
Fe		Sb	
Ga		Se	
Gd		Si	0.551
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.051
Ir		Tl	
La		V	0.039
Li		W	0.009
Mg		Y	
Mn	0.496	Zn	
Mo	0.34	Zr	
N	0.0192		

Ag		Na	
Al	0.94	Nb	0.012
As	(0.004)	Nd	
Au		Ni	7.3
B	0.0029	O	0.001
Be		P	0.024
Bi		Pb	
C	0.072	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.113	Rh	
Cr	16.99	Ru	
Cu	0.316	S	0.0006
Fe		Sb	
Ga		Se	
Gd		Si	0.263
Ge		Sn	0.007
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	0.098
Ir		Tl	
La		V	0.072
Li		W	0.026
Mg		Y	
Mn	0.74	Zn	
Mo	0.36	Zr	
N	0.0172		

Ag		Na	
Al	1.09	Nb	0.009
As	(0.004)	Nd	
Au		Ni	7.11
B	0.0017	O	(0.004)
Be		P	0.02
Bi	(<0.005)	Pb	(<0.005)
C	0.08	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd		Pt	
Ce		Re	
Co	0.048	Rh	
Cr	17.08	Ru	
Cu	0.36	S	0.0005
Fe	(72.63)	Sb	(<0.005)
Ga		Se	(<0.005)
Gd		Si	0.51
Ge		Sn	0.006
H		Sr	
Hf	(<0.001)	Ta	(<0.005)
Hg		Te	
In		Ti	0.083
Ir		Tl	
La		V	0.062
Li		W	0.011
Mg	(0.006)	Y	(<0.001)
Mn	0.73	Zn	(<0.005)
Mo	0.35	Zr	(<0.005)
N	0.0153		

Stainless Steel

Name MBH-13X PH13800 A
Description Precipitation Hardenable Stainless Steel
Grade AISI PH13-8Mo
UNS S13800

Name IARM-335A
Description Precipitation Hardenable Stainless Steel
Grade Alloy AM355
UNS S35500

Name IARM-15A ↓
Description Precipitation Hardenable Stainless Steel
Grade Custom 450
UNS S45000

Name IARM-15C
Description Precipitation Hardenable Stainless Steel
Grade Custom 450
UNS S45000

Name MBH-13X 45500 A
Description Precipitation Hardenable Stainless Steel
Grade Custom 455
UNS S45500

Ag		Na	
Al	1.075	Nb	
As		Nd	
Au		Ni	8.04
B		O	
Be		P	0.0064
Bi		Pb	
C	0.0386	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.022	Rh	
Cr	12.52	Ru	
Cu	0.0449	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.081
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0122
Ir		Tl	
La		V	0.0188
Li		W	
Mg		Y	
Mn	0.0332	Zn	
Mo	2.1	Zr	
N	0.0041		

Ag		Na	
Al	0.019	Nb	0.015
As	(0.01)	Nd	
Au		Ni	4.27
B	0.0007	O	0.002
Be		P	0.016
Bi		Pb	(0.002)
C	0.138	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.063	Rh	
Cr	15.3	Ru	
Cu	0.086	S	0.0005
Fe		Sb	
Ga		Se	
Gd		Si	0.39
Ge		Sn	0.0034
H		Sr	
Hf		Ta	(0.01)
Hg		Te	
In		Ti	(0.002)
Ir		Tl	
La		V	0.094
Li		W	0.008
Mg		Y	
Mn	0.85	Zn	
Mo	2.72	Zr	(0.002)
N	0.085		

Ag		Na	
Al	0.029	Nb	0.62
As		Nd	
Au		Ni	6.54
B		O	(0.022)
Be		P	0.021
Bi		Pb	
C	0.033	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.11	Rh	
Cr	14.9	Ru	
Cu	1.59	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.41
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(<0.01)
Ir		Tl	
La		V	0.09
Li		W	0.026
Mg		Y	
Mn	0.38	Zn	
Mo	0.77	Zr	
N	(0.015)		

Ag		Na	
Al	0.005	Nb	0.63
As	0.0044	Nd	
Au		Ni	6.35
B	0.0006	O	0.003
Be		P	0.019
Bi		Pb	(0.003)
C	0.032	Pd	
Ca	(0.0004)	Pr	
Cd		Pt	
Ce	(<0.01)	Re	
Co	0.024	Rh	
Cr	14.39	Ru	
Cu	1.54	S	0.0018
Fe		Sb	(0.003)
Ga		Se	(0.0003)
Gd		Si	0.26
Ge		Sn	0.009
H		Sr	
Hf		Ta	(0.004)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.041
Li		W	0.02
Mg	(<0.005)	Y	
Mn	0.76	Zn	(0.01)
Mo	0.722	Zr	0.003
N	0.0148		

Ag		Na	
Al	0.073	Nb	0.25
As		Nd	
Au		Ni	8.36
B		O	
Be		P	0.0049
Bi		Pb	
C	0.0041	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0152	Rh	
Cr	11.39	Ru	
Cu	2.2	S	0.002
Fe		Sb	
Ga		Se	
Gd		Si	0.059
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	1.187
Ir		Tl	
La		V	0.0689
Li		W	
Mg		Y	
Mn	0.0263	Zn	
Mo	0.0185	Zr	
N	0.003		

Stainless Steel

Name IARM-16C
Description Precipitation Hardenable Stainless Steel
Grade Custom 455
UNS S45500

Name MBH-13X 46500 A
Description Precipitation Hardenable Stainless Steel
Grade Custom 465
UNS S46500

Name IARM-354A
Description Precipitation Hardenable Stainless Steel
Grade Custom 465
UNS S46500

Name IARM-21D
Description Precipitation Hardenable Stainless Steel
Grade PH13-8Mo
UNS S13800

Name MBH-13X FV520B A
Description Precipitation Hardenable Stainless Steel
Grade
UNS

Ag		Na	
Al	0.072	Nb	0.248
As	0.003	Nd	
Au		Ni	8.23
B	0.0011	O	0.0014
Be		P	0.007
Bi		Pb	
C	0.003	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.017	Rh	
Cr	11.34	Ru	
Cu	2.08	S	0.0046
Fe		Sb	
Ga		Se	
Gd		Si	0.03
Ge		Sn	0.003
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	1.16
Ir		Tl	
La		V	0.07
Li		W	0.008
Mg	(0.0001)	Y	
Mn	0.024	Zn	
Mo	0.009	Zr	0.001
N	0.003		

Ag		Na	
Al	0.069	Nb	0.005
As		Nd	
Au		Ni	10.91
B	0.0016	O	
Be		P	0.002
Bi		Pb	
C	(0.003)	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0101	Rh	
Cr	11.7	Ru	
Cu	0.0373	S	0.001
Fe		Sb	
Ga		Se	
Gd		Si	0.075
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	1.51
Ir		Tl	
La		V	0.0049
Li		W	
Mg		Y	
Mn	0.004	Zn	
Mo	0.948	Zr	
N	0.0031		

Ag		Na	
Al	0.05	Nb	0.02
As	(0.002)	Nd	
Au		Ni	11.05
B	0.0023	O	0.0012
Be		P	0.0029
Bi		Pb	(0.004)
C	0.0076	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce	(<0.001)	Re	
Co	0.022	Rh	
Cr	11.61	Ru	
Cu	0.018	S	0.0019
Fe		Sb	(0.0002)
Ga		Se	(<0.003)
Gd		Si	0.04
Ge		Sn	0.002
H		Sr	
Hf		Ta	(<0.004)
Hg		Te	
In		Ti	1.56
Ir		Tl	
La		V	0.02
Li		W	0.02
Mg	(0.0001)	Y	
Mn	0.012	Zn	(<0.005)
Mo	0.95	Zr	(<0.005)
N	0.0018		

Ag		Na	
Al	1.03	Nb	0.005
As	(0.003)	Nd	
Au		Ni	8.29
B	(0.0004)	O	(0.0006)
Be		P	0.008
Bi		Pb	(<0.001)
C	0.032	Pd	
Ca	(0.0004)	Pr	
Cd		Pt	
Ce		Re	
Co	0.078	Rh	
Cr	12.69	Ru	
Cu	0.017	S	0.0014
Fe		Sb	(<0.001)
Ga		Se	(<0.001)
Gd		Si	0.039
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	(<0.003)
Hg		Te	
In		Ti	0.016
Ir		Tl	
La		V	0.017
Li		W	0.012
Mg	(<0.0005)	Y	
Mn	0.052	Zn	(<0.002)
Mo	2.23	Zr	(0.002)
N	0.0037		

Ag		Na	
Al		Nb	0.301
As		Nd	
Au		Ni	5.29
B		O	
Be		P	0.0221
Bi		Pb	
C	0.0181	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.03	Rh	
Cr	13.73	Ru	
Cu	1.462	S	0.0016
Fe		Sb	
Ga		Se	
Gd		Si	0.342
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.08
Li		W	0.02
Mg		Y	
Mn	0.655	Zn	
Mo	1.334	Zr	
N	0.0197		

Stainless Steel

Name MBH-13X PH2 M
Description Precipitation Hardenable Stainless Steel
Grade
UNS

Name MBH-13X PH2S143 A
Description Precipitation Hardenable Stainless Steel
Grade
UNS

Name MBH-13X PH3 N
Description Precipitation Hardenable Stainless Steel
Grade
UNS

Name MBH-13X PH4 N
Description Precipitation Hardenable Stainless Steel
Grade
UNS

Name MBH-13X PH4 P
Description Precipitation Hardenable Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0419	Nb	0.143
As		Nd	
Au		Ni	3.56
B	0.0047	O	
Be		P	0.0201
Bi		Pb	
C	0.0598	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0927	Rh	
Cr	16.8	Ru	
Cu	4.03	S	0.0419
Fe		Sb	
Ga		Se	
Gd		Si	0.502
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.049
Ir		Tl	
La		V	0.1028
Li		W	
Mg		Y	
Mn	1.184	Zn	
Mo	1.009	Zr	
N	0.052		

Ag		Na	
Al		Nb	0.225
As		Nd	
Au		Ni	5.2
B		O	
Be		P	0.0212
Bi		Pb	
C	0.044	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0483	Rh	
Cr	13.46	Ru	
Cu	1.61	S	0.0021
Fe		Sb	
Ga		Se	
Gd		Si	0.479
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.087
Li		W	0.018
Mg		Y	
Mn	0.546	Zn	
Mo	1.326	Zr	
N	0.0246		

Ag		Na	
Al	0.05	Nb	0.45
As		Nd	
Au		Ni	3.03
B	0.0042	O	
Be		P	0.0136
Bi		Pb	
C	0.11	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.306	Rh	
Cr	16	Ru	
Cu	5.83	S	0.019
Fe		Sb	
Ga		Se	
Gd		Si	1.25
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0193
Ir		Tl	
La		V	0.246
Li		W	
Mg		Y	
Mn	0.39	Zn	
Mo	0.74	Zr	
N	0.111		

Ag		Na	
Al	0.094	Nb	0.303
As		Nd	
Au		Ni	4
B	0.0033	O	
Be		P	0.0285
Bi		Pb	
C	0.04	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.6	Rh	
Cr	14.87	Ru	
Cu	5.24	S	0.0166
Fe		Sb	
Ga		Se	
Gd		Si	0.747
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.1
Ir		Tl	
La		V	0.5
Li		W	
Mg		Y	
Mn	0.793	Zn	
Mo	0.247	Zr	
N	0.078		

Ag		Na	
Al	0.029	Nb	0.355
As		Nd	
Au		Ni	4.07
B	0.0031	O	
Be		P	0.021
Bi		Pb	
C	0.033	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.5	Rh	
Cr	15.5	Ru	
Cu	5.53	S	0.019
Fe		Sb	
Ga		Se	
Gd		Si	0.64
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.075
Ir		Tl	
La		V	0.55
Li		W	
Mg		Y	
Mn	0.69	Zn	
Mo	0.255	Zr	
N	0.082		

Stainless Steel

Name MBH-13X PH7 F
Description Precipitation Hardenable Stainless Steel
Grade
UNS

Ag		Na	
Al	0.012	Nb	0.241
As		Nd	
Au		Ni	5.41
B		O	
Be		P	0.0283
Bi		Pb	
C	0.118	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0493	Rh	
Cr	13.16	Ru	
Cu	0.777	S	0.0057
Fe		Sb	
Ga		Se	
Gd		Si	1.402
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0196
Ir		Tl	
La		V	0.043
Li		W	
Mg		Y	
Mn	1.487	Zn	
Mo	2.52	Zr	
N	0.044		

Name MBH-13X 12538 J
Description Special Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	6.07
B		O	
Be		P	
Bi		Pb	
C	0.04	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	23.72	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	0.64
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.78	Zn	
Mo	1.53	Zr	
N			

Name MBH-13X 12540 M ↓
Description Special Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	0.107
As		Nd	
Au		Ni	4.975
B		O	
Be		P	0.051
Bi		Pb	
C	0.131	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.109	Rh	
Cr	27.44	Ru	
Cu	0.181	S	0.0512
Fe		Sb	
Ga		Se	
Gd		Si	0.805
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.21
Li		W	0.097
Mg		Y	
Mn	0.8	Zn	
Mo	0.993	Zr	
N	0.054		

Name MBH-13X 14207 L
Description Special Stainless Steel
Grade
UNS

Ag		Na	
Al	0.0226	Nb	0.258
As		Nd	
Au		Ni	12.43
B		O	
Be		P	0.0061
Bi		Pb	
C	0.0388	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0089	Rh	
Cr	19.63	Ru	
Cu	0.186	S	0.006
Fe		Sb	
Ga		Se	
Gd		Si	1.448
Ge		Sn	
H		Sr	
Hf		Ta	0.082
Hg		Te	
In		Ti	0.0119
Ir		Tl	
La		V	0.0043
Li		W	2.99
Mg		Y	
Mn	0.597	Zn	
Mo	0.573	Zr	
N	0.0099		

Name MBH-13X 14212 S
Description Special Stainless Steel
Grade
UNS

Ag		Na	
Al		Nb	0.55
As		Nd	
Au		Ni	8.81
B		O	
Be		P	0.032
Bi		Pb	
C	0.119	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.109	Rh	
Cr	21.64	Ru	
Cu	0.611	S	0.0386
Fe		Sb	
Ga		Se	
Gd		Si	2.47
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.1175
Li		W	3.68
Mg		Y	
Mn	0.166	Zn	
Mo	0.52	Zr	
N	0.0055		

Stainless Steel

Name MBH-13X 14215 L
Description Special Stainless Steel
Grade
UNS

Name MBH-13X 14216 P
Description Special Stainless Steel
Grade
UNS

Name MBH-13X 14219 K
Description Special Stainless Steel
Grade
UNS

Name MBH-13X 14211 R
Description Special Stainless Steel
Grade
UNS

Name IARM-Fe309-18◆
Description Stainless Steel, Austenitic
Grade AISI 309
UNS S30900

Ag		Na	
Al		Nb	0.0196
As		Nd	
Au		Ni	15.86
B		O	
Be		P	0.005
Bi		Pb	
C	0.136	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0057	Rh	
Cr	22.89	Ru	
Cu	0.011	S	0.0068
Fe		Sb	
Ga		Se	
Gd		Si	0.596
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.048
Li		W	3.02
Mg		Y	
Mn	1.11	Zn	
Mo	0.0048	Zr	
N			

Ag		Na	
Al		Nb	0.248
As		Nd	
Au		Ni	12.06
B		O	
Be		P	0.0048
Bi		Pb	
C	0.0424	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.248	Rh	
Cr	23.44	Ru	
Cu	0.231	S	0.007
Fe		Sb	
Ga		Se	
Gd		Si	1.566
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0722
Li		W	2.25
Mg		Y	
Mn	0.663	Zn	
Mo	0.209	Zr	
N	0.0152		

Ag		Na	
Al		Nb	0.14
As		Nd	
Au		Ni	12.66
B		O	
Be		P	0.0401
Bi		Pb	
C	0.0997	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0475	Rh	
Cr	21.46	Ru	
Cu	0.138	S	0.0456
Fe		Sb	
Ga		Se	
Gd		Si	1.504
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0188
Li		W	4.17
Mg		Y	
Mn	0.482	Zn	
Mo	0.169	Zr	
N			

Ag		Na	
Al	0.089	Nb	0.15
As		Nd	
Au		Ni	12.64
B		O	
Be		P	0.0093
Bi		Pb	
C	0.047	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.034	Rh	
Cr	24.48	Ru	
Cu	0.336	S	0.0088
Fe		Sb	
Ga		Se	
Gd		Si	1.73
Ge		Sn	
H		Sr	
Hf		Ta	0.0152
Hg		Te	
In		Ti	0.206
Ir		Tl	
La		V	0.0395
Li		W	2.99
Mg		Y	
Mn	0.787	Zn	
Mo	0.395	Zr	
N			

Ag		Na	
Al	(0.01)	Nb	0.021
As	0.0065	Nd	
Au		Ni	12.2
B	(<0.001)	O	(0.0029)
Be		P	0.029
Bi		Pb	
C	0.066	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.248	Rh	
Cr	22.42	Ru	
Cu	0.43	S	(0.002)
Fe	(62)	Sb	0.0018
Ga		Se	
Gd		Si	0.3
Ge		Sn	0.012
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.003)
Ir		Tl	
La		V	0.073
Li		W	0.063
Mg	(<0.001)	Y	
Mn	1.61	Zn	
Mo	0.357	Zr	(0.002)
N	(0.058)		

Stainless Steel

Name MBH-11X 15310 B ♦

Description Steel with Chromium

Grade

UNS

Ag		Na	
Al	0.018	Nb	
As		Nd	
Au		Ni	4.59
B		O	
Be		P	0.07
Bi		Pb	
C	2.63	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.157	Rh	
Cr	20.7	Ru	
Cu	2.37	S	0.029
Fe		Sb	
Ga		Se	
Gd		Si	0.99
Ge		Sn	(<0.04)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.034
Ir		Tl	
La		V	0.096
Li		W	0.188
Mg		Y	
Mn	0.97	Zn	
Mo	0.92	Zr	
N			

Section 9

Tool Steel

Name	IARM-FeS7-18
Description	Air/Oil Hardening Tool Steel
Grade	AISI S-7
UNS	T41907

Name	IARM-306A ↓
Description	Bearing Steel
Grade	AISI M-50
UNS	T11350

Name	IARM-306B
Description	Bearing Steel
Grade	AISI M-50
UNS	T11350

Name	IARM-39B
Description	Cold-Work Tool Steel
Grade	AISI A-2
UNS	T30102

Name	IARM-39C
Description	Cold-Work Tool Steel
Grade	AISI A-2
UNS	T30102

Ag		Na	
Al	0.015	Nb	0.005
As	0.005	Nd	
Au		Ni	0.17
B	(0.0003)	O	0.0023
Be	(<0.005)	P	0.021
Bi	(<0.015)	Pb	0.0003
C	0.51	Pd	
Ca		Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	0.0106	Rh	
Cr	3.28	Ru	
Cu	0.128	S	0.0032
Fe	(93.6)	Sb	0.0016
Ga		Se	
Gd		Si	0.47
Ge		Sn	0.006
H	(<0.0001)	Sr	
Hf		Ta	(<0.002)
Hg		Te	
In		Ti	0.0014
Ir		Tl	
La		V	0.233
Li		W	0.016
Mg	(<0.003)	Y	
Mn	0.271	Zn	0.0011
Mo	1.39	Zr	(<0.006)
N	0.0102		

Ag		Na	
Al	0.005	Nb	
As	(0.004)	Nd	
Au		Ni	
B	(0.001)	O	(0.001)
Be		P	0.006
Bi		Pb	
C	0.83	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	4.16	Ru	
Cu	0.042	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.16
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.97
Li		W	0.003
Mg		Y	
Mn	0.209	Zn	
Mo	4.2	Zr	
N	0.118		

Ag		Na	
Al	0.082	Nb	0.005
As	0.004	Nd	
Au		Ni	0.095
B	0.0007	O	0.0009
Be		P	0.0061
Bi	(<0.0001)	Pb	(0.0008)
C	0.837	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	4.12	Ru	
Cu	0.058	S	0.0011
Fe		Sb	(0.002)
Ga		Se	(<0.002)
Gd		Si	0.213
Ge		Sn	0.0042
H		Sr	
Hf		Ta	(<0.011)
Hg		Te	
In		Ti	0.0016
Ir		Tl	
La		V	0.98
Li		W	0.009
Mg	(<0.002)	Y	
Mn	0.24	Zn	(<0.055)
Mo	4.23	Zr	0.0014
N	0.005		

Ag		Na	
Al	0.006	Nb	0.006
As		Nd	
Au		Ni	0.14
B		O	
Be		P	0.017
Bi		Pb	
C	0.99	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.014	Rh	
Cr	4.79	Ru	
Cu	0.1	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.35
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.22
Li		W	(0.026)
Mg		Y	
Mn	0.54	Zn	
Mo	1.01	Zr	
N	0.0096		

Ag		Na	
Al	0.017	Nb	0.004
As	(0.005)	Nd	
Au		Ni	0.144
B	0.001	O	0.001
Be		P	0.019
Bi		Pb	(0.0001)
C	0.99	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.013	Rh	
Cr	4.99	Ru	
Cu	0.077	S	0.007
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.28
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0029
Ir		Tl	
La		V	0.21
Li		W	0.011
Mg		Y	
Mn	0.45	Zn	
Mo	0.97	Zr	(0.002)
N	0.011		

Tool Steel

Name	IARM-40A ↓
Description	Cold-Work Tool Steel
Grade	AISI A-6
UNS	T30106

Name	IARM-40B
Description	Cold-Work Tool Steel
Grade	AISI A-6
UNS	T30106

Name	IARM-40C
Description	Cold-Work Tool Steel
Grade	AISI A-6
UNS	T30106

Name	IARM-41D
Description	Cold-Work Tool Steel
Grade	AISI D-2
UNS	T30402

Name	MBH-18X D7 A
Description	Gases in Tool Steel
Grade	12% Cr, 4% V, 1% Mo
UNS	

Ag		Na	
Al	0.009	Nb	0.004
As	(0.007)	Nd	
Au		Ni	0.14
B	(0.0003)	O	(0.0024)
Be		P	0.024
Bi		Pb	
C	0.68	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	1.04	Ru	
Cu	0.092	S	0.01
Fe		Sb	
Ga		Se	
Gd		Si	0.25
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.007
Li		W	(0.013)
Mg		Y	
Mn	2.15	Zn	
Mo	1.05	Zr	
N	0.0077		

Ag		Na	
Al	(0.006)	Nb	0.005
As		Nd	
Au		Ni	0.096
B	(0.001)	O	(0.0014)
Be		P	0.012
Bi		Pb	
C	0.68	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.015	Rh	
Cr	1.04	Ru	
Cu	0.5	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.39
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.014
Li		W	0.013
Mg		Y	
Mn	1.98	Zn	
Mo	1.22	Zr	
N	0.0107		

Ag		Na	
Al	0.019	Nb	0.003
As	0.008	Nd	
Au		Ni	0.255
B	0.0009	O	0.0013
Be		P	0.014
Bi		Pb	
C	0.72	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.99	Ru	
Cu	0.142	S	0.012
Fe		Sb	
Ga		Se	
Gd		Si	0.32
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.008
Ir		Tl	
La		V	0.01
Li		W	0.009
Mg		Y	
Mn	1.91	Zn	
Mo	1.27	Zr	(0.002)
N	0.0083		

Ag		Na	
Al	0.014	Nb	0.004
As	(0.01)	Nd	
Au		Ni	0.114
B	(0.0006)	O	0.003
Be		P	0.021
Bi	(<0.002)	Pb	(0.0008)
C	1.519	Pd	
Ca	(0.0008)	Pr	
Cd		Pt	
Ce		Re	
Co	0.02	Rh	
Cr	11.5	Ru	
Cu	0.047	S	0.012
Fe		Sb	(<0.01)
Ga		Se	(<0.002)
Gd		Si	0.256
Ge		Sn	0.005
H	(<0.001)	Sr	
Hf		Ta	(<0.01)
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.77
Li		W	0.034
Mg	(<0.001)	Y	
Mn	0.256	Zn	(<0.002)
Mo	0.74	Zr	(0.002)
N	0.0152		

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	0.072
Be		P	
Bi		Pb	
C	2.32	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	0.0111
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N	0.0124		

Tool Steel

Name	IARM-43A ↓
Description	High-Speed Tool Steel
Grade	AISI L-6
UNS	T61206

Name	IARM-43B
Description	High-Speed Tool Steel
Grade	AISI L-6
UNS	T61206

Name	IARM-304A ↓
Description	High-Speed Tool Steel
Grade	AISI M-1
UNS	T11301

Name	IARM-FeM1-18 ♦
Description	High-Speed Tool Steel
Grade	AISI M-1
UNS	T11301

Name	IARM-324A ↓
Description	High-Speed Tool Steel
Grade	AISI M-10
UNS	T11310

Ag		Na	
Al	0.03	Nb	0.003
As	(0.006)	Nd	
Au		Ni	1.34
B	(0.0002)	O	(0.0026)
Be		P	0.009
Bi		Pb	(<0.005)
C	0.68	Pd	
Ca	(0.0006)	Pr	
Cd		Pt	
Ce		Re	
Co	0.016	Rh	
Cr	0.66	Ru	
Cu	0.15	S	0.034
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.24
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.008
Li		W	(0.016)
Mg		Y	
Mn	0.61	Zn	
Mo	0.2	Zr	(<0.01)
N	0.0089		

Ag		Na	
Al	0.021	Nb	0.004
As	0.005	Nd	
Au		Ni	1.39
B	0.0002	O	0.0016
Be		P	0.008
Bi		Pb	(<0.0005)
C	0.711	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.012	Rh	
Cr	0.651	Ru	
Cu	0.18	S	0.013
Fe		Sb	(<0.002)
Ga		Se	
Gd		Si	0.251
Ge		Sn	0.013
H		Sr	
Hf		Ta	(<0.001)
Hg		Te	
In		Ti	0.0047
Ir		Tl	
La		V	0.0035
Li		W	(<0.005)
Mg	(<0.003)	Y	
Mn	0.56	Zn	
Mo	0.206	Zr	(<0.001)
N	0.0093		

Ag		Na	
Al	0.009	Nb	0.021
As	(0.01)	Nd	
Au		Ni	0.133
B	0.002	O	0.002
Be		P	0.019
Bi		Pb	
C	0.857	Pd	
Ca	(0.002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.278	Rh	
Cr	3.55	Ru	
Cu	0.14	S	0.0016
Fe		Sb	(0.001)
Ga		Se	
Gd		Si	0.36
Ge		Sn	0.006
H		Sr	
Hf		Ta	(0.002)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	1.23
Li		W	1.65
Mg		Y	
Mn	0.26	Zn	
Mo	8.04	Zr	(0.002)
N	0.034		

Ag		Na	
Al	0.007	Nb	0.013
As	0.009	Nd	
Au		Ni	0.104
B	(0.0013)	O	0.0021
Be		P	0.013
Bi		Pb	(0.005)
C	0.85	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.226	Rh	
Cr	3.67	Ru	
Cu	0.091	S	(0.003)
Fe	(83)	Sb	(0.006)
Ga		Se	
Gd		Si	0.44
Ge		Sn	0.0041
H		Sr	
Hf		Ta	0.0024
Hg		Te	
In		Ti	0.0044
Ir		Tl	
La		V	1.19
Li		W	1.98
Mg		Y	
Mn	0.318	Zn	(<0.003)
Mo	8	Zr	0.0013
N	0.037		

Ag		Na	
Al	0.002	Nb	0.014
As	0.006	Nd	
Au		Ni	0.081
B	0.0004	O	0.003
Be		P	0.009
Bi		Pb	
C	0.99	Pd	
Ca	0.0009	Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	0.42	Ru	
Cu	0.22	S	0.028
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.163
Ge		Sn	0.011
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0016
Ir		Tl	
La		V	0.0017
Li		W	(0.003)
Mg		Y	
Mn	1.01	Zn	(0.003)
Mo	0.022	Zr	(0.001)
N	0.0082		

Tool Steel

Name	IARM-FeM2-18
Description	High-Speed Tool Steel
Grade	AISI M-2
UNS	T11302

Name	IARM-320A
Description	High-Speed Tool Steel
Grade	AISI M-35
UNS	T11335

Name	IARM-251A ↓
Description	High-Speed Tool Steel
Grade	AISI M-4
UNS	T11304

Name	IARM-FeM4-18 ♦
Description	High-Speed Tool Steel
Grade	AISI M-4
UNS	T11304

Name	IARM-FeM62-18
Description	High-Speed Tool Steel
Grade	AISI M62
UNS	T11362

Ag		Na	
Al	0.014	Nb	0.021
As	0.008	Nd	
Au		Ni	0.182
B	(0.0004)	O	0.0016
Be		P	0.025
Bi	(<0.005)	Pb	(0.001)
C	0.853	Pd	
Ca	(<0.005)	Pr	
Cd	(<0.0002)	Pt	
Ce		Re	
Co	0.28	Rh	
Cr	4.23	Ru	
Cu	0.098	S	0.001
Fe	81.4	Sb	(0.014)
Ga		Se	(<0.005)
Gd		Si	0.26
Ge		Sn	0.007
H	(<0.0001)	Sr	
Hf		Ta	(0.0023)
Hg		Te	
In		Ti	0.0016
Ir		Tl	
La		V	1.9
Li		W	5.81
Mg	(<0.001)	Y	
Mn	0.337	Zn	(0.0005)
Mo	4.92	Zr	(0.0035)
N	0.0148		

Ag		Na	
Al	0.023	Nb	0.015
As	0.013	Nd	
Au		Ni	0.204
B	0.0011	O	0.0021
Be		P	0.021
Bi	(<0.0001)	Pb	(<0.007)
C	0.093	Pd	
Ca	(<0.003)	Pr	
Cd		Pt	
Ce		Re	
Co	4.9	Rh	
Cr	4.22	Ru	
Cu	0.091	S	0.0015
Fe		Sb	(<0.0011)
Ga		Se	(<0.0001)
Gd		Si	0.36
Ge		Sn	0.008
H		Sr	
Hf		Ta	(<0.0020)
Hg		Te	
In		Ti	0.0032
Ir		Tl	
La		V	1.76
Li		W	6.01
Mg	(<0.003)	Y	
Mn	0.33	Zn	(<0.001)
Mo	4.79	Zr	(0.003)
N	0.014		

Ag		Na	
Al	0.01	Nb	0.016
As	0.016	Nd	
Au		Ni	0.131
B	(0.002)	O	(0.01)
Be		P	0.014
Bi		Pb	(0.002)
C	1.398	Pd	
Ca	(0.0005)	Pr	
Cd		Pt	
Ce		Re	
Co	0.129	Rh	
Cr	4.1	Ru	
Cu	0.13	S	0.058
Fe		Sb	
Ga		Se	
Gd		Si	0.58
Ge		Sn	0.011
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	3.9
Li		W	5.5
Mg		Y	
Mn	0.33	Zn	
Mo	5.16	Zr	(0.002)
N	0.044		

Ag		Na	
Al	(0.01)	Nb	0.015
As	0.0058	Nd	
Au		Ni	0.127
B	(0.0012)	O	0.009
Be		P	0.013
Bi		Pb	0.004
C	1.42	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.08	Rh	
Cr	4.16	Ru	
Cu	0.104	S	0.062
Fe	79	Sb	(0.005)
Ga		Se	
Gd		Si	0.6
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0018
Ir		Tl	
La		V	3.97
Li		W	5.55
Mg		Y	
Mn	0.298	Zn	
Mo	5.07	Zr	(0.0013)
N	0.042		

Ag		Na	
Al	0.006	Nb	0.017
As		Nd	
Au		Ni	0.129
B	0.003	O	0.003
Be		P	0.016
Bi		Pb	
C	1.32	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.105	Rh	
Cr	3.86	Ru	
Cu	0.115	S	0.015
Fe		Sb	
Ga		Se	
Gd		Si	0.37
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	2.02
Li		W	6.31
Mg		Y	
Mn	0.27	Zn	
Mo	10.2	Zr	
N	0.045		

Tool Steel

Name MBH-14X 14946 D ↓
Description High-Speed Tool Steel
Grade AISI T-1
UNS T12001

Name IARM-48A ↓
Description High-Speed Tool Steel
Grade AISI T-1
UNS T12001

Name IARM-FeTi-18
Description High-Speed Tool Steel
Grade AISI T-1
UNS T12001

Name IARM-281A
Description High-Speed Tool Steel
Grade AISI T-4
UNS T12004

Name IARM-255A ↓
Description Hot-Work Tool Steel
Grade AISI H-11
UNS T20811

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.06
B		O	
Be		P	0.051
Bi		Pb	
C	0.85	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.44	Rh	
Cr	5.06	Ru	
Cu	0.25	S	0.048
Fe		Sb	
Ga		Se	
Gd		Si	0.46
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	1.03
Li		W	16.97
Mg		Y	
Mn	0.53	Zn	
Mo	0.21	Zr	
N			

Ag		Na	
Al	(0.016)	Nb	(0.003)
As	(0.051)	Nd	
Au		Ni	0.23
B	(0.0018)	O	(0.0107)
Be		P	0.036
Bi		Pb	
C	0.79	Pd	
Ca	(0.0006)	Pr	
Cd		Pt	
Ce		Re	
Co	0.39	Rh	
Cr	4.32	Ru	
Cu	0.13	S	0.021
Fe		Sb	
Ga		Se	
Gd		Si	0.29
Ge		Sn	0.019
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	1.13
Li		W	17.99
Mg		Y	
Mn	0.33	Zn	
Mo	0.4	Zr	(0.006)
N	0.0221		

Ag		Na	
Al	0.054	Nb	0.004
As	(0.007)	Nd	
Au		Ni	0.14
B	(<0.005)	O	0.0027
Be		P	0.026
Bi	(<0.005)	Pb	(<0.013)
C	0.8	Pd	
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce		Re	
Co	0.096	Rh	
Cr	3.98	Ru	
Cu	0.034	S	(<0.001)
Fe		Sb	(<0.001)
Ga		Se	(<0.005)
Gd		Si	0.3
Ge		Sn	0.01
H	(<0.001)	Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.026
Ir		Tl	
La		V	1.05
Li		W	18
Mg	(<0.012)	Y	
Mn	0.295	Zn	(0.0017)
Mo	0.124	Zr	(0.003)
N	0.0195		

Ag		Na	
Al	0.007	Nb	0.094
As	(0.02)	Nd	
Au		Ni	0.15
B	(0.003)	O	0.003
Be		P	0.015
Bi		Pb	
C	0.74	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	4.8	Rh	
Cr	3.89	Ru	
Cu	0.096	S	0.019
Fe		Sb	
Ga		Se	
Gd		Si	0.29
Ge		Sn	0.02
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.9
Li		W	17.6
Mg	(0.003)	Y	
Mn	0.3	Zn	
Mo	0.49	Zr	(0.002)
N	0.0064		

Ag		Na	
Al	0.01	Nb	0.004
As	(0.002)	Nd	
Au		Ni	0.083
B	0.0004	O	0.0011
Be		P	0.013
Bi		Pb	(<0.001)
C	0.403	Pd	
Ca	(0.0004)	Pr	
Cd		Pt	
Ce		Re	
Co	0.009	Rh	
Cr	4.84	Ru	
Cu	0.049	S	0.0012
Fe		Sb	
Ga		Se	
Gd		Si	0.93
Ge		Sn	0.006
H		Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.43
Li		W	0.007
Mg		Y	
Mn	0.27	Zn	
Mo	1.33	Zr	(<0.005)
N	0.0067		

Tool Steel

Name	IARM-255B
Description	Hot-Work Tool Steel
Grade	AISI H-11
UNS	T20811

Name	IARM-42A ↓
Description	Hot-Work Tool Steel
Grade	AISI H-13
UNS	T20813

Name	IARM-42B ↓
Description	Hot-Work Tool Steel
Grade	AISI H-13
UNS	T20813

Name	IARM-42C
Description	Hot-Work Tool Steel
Grade	AISI H-13
UNS	T20813

Name	IARM-45B
Description	Oil-Hardening Tool Steel
Grade	AISI O-6
UNS	T31506

Ag		Na	
Al	0.032	Nb	0.006
As	(0.004)	Nd	
Au		Ni	0.062
B	(0.0004)	O	(0.002)
Be		P	0.01
Bi	(<0.004)	Pb	(<0.0005)
C	0.389	Pd	
Ca	(<0.0003)	Pr	
Cd	(<0.0001)	Pt	
Ce		Re	
Co	0.009	Rh	
Cr	4.82	Ru	
Cu	0.073	S	0.002
Fe		Sb	(<0.002)
Ga		Se	(<0.011)
Gd		Si	0.91
Ge		Sn	0.006
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	(0.0048)
Ir		Tl	
La		V	0.515
Li		W	(0.007)
Mg	(<0.0001)	Y	
Mn	0.317	Zn	(<0.011)
Mo	1.3	Zr	(<0.005)
N	0.005		

Ag		Na	
Al	(0.024)	Nb	(0.001)
As		Nd	
Au		Ni	0.32
B	(0.0007)	O	(0.0019)
Be		P	0.011
Bi		Pb	(<0.005)
C	0.39	Pd	
Ca	(0.0002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.015	Rh	
Cr	5.42	Ru	
Cu	0.07	S	0.007
Fe		Sb	
Ga		Se	
Gd		Si	1.04
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	1.02
Li		W	(0.014)
Mg		Y	
Mn	0.35	Zn	
Mo	1.29	Zr	
N	0.0143		

Ag		Na	
Al	0.013	Nb	0.004
As		Nd	
Au		Ni	0.18
B	(0.0005)	O	0.0026
Be		P	0.014
Bi		Pb	(0.003)
C	0.38	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.013	Rh	
Cr	5.1	Ru	
Cu	0.089	S	0.005
Fe		Sb	
Ga		Se	
Gd		Si	0.99
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.003
Ir		Tl	
La		V	0.94
Li		W	0.012
Mg		Y	
Mn	0.36	Zn	
Mo	1.23	Zr	
N	0.0105		

Ag		Na	
Al	0.018	Nb	0.004
As	(0.01)	Nd	
Au		Ni	0.051
B	0.0011	O	0.003
Be		P	0.022
Bi		Pb	0.0007
C	0.382	Pd	
Ca	(0.0005)	Pr	
Cd		Pt	
Ce		Re	
Co	0.022	Rh	
Cr	4.86	Ru	
Cu	0.066	S	0.0037
Fe		Sb	(0.004)
Ga		Se	
Gd		Si	0.85
Ge		Sn	0.006
H		Sr	
Hf		Ta	(0.004)
Hg		Te	
In		Ti	0.0125
Ir		Tl	
La		V	0.84
Li		W	0.32
Mg		Y	
Mn	0.4	Zn	(0.008)
Mo	1.29	Zr	(0.002)
N	0.0201		

Ag		Na	
Al	0.01	Nb	0.002
As	0.002	Nd	
Au		Ni	0.024
B	(0.0001)	O	0.0005
Be		P	0.01
Bi		Pb	
C	1.42	Pd	
Ca	(0.001)	Pr	
Cd		Pt	
Ce		Re	
Co	0.004	Rh	
Cr	0.061	Ru	
Cu	0.018	S	0.008
Fe		Sb	(0.001)
Ga		Se	
Gd		Si	0.92
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.003
Li		W	(0.004)
Mg		Y	
Mn	0.9	Zn	
Mo	0.24	Zr	(0.001)
N	0.008		

Tool Steel

Name	IARM-46A ↓
Description	Shock-Resisting Tool Steel
Grade	AISI S-1
UNS	T41901

Name	IARM-46B
Description	Shock-Resisting Tool Steel
Grade	AISI S-1
UNS	T41901

Name	IARM-47A ↓
Description	Shock-Resisting Tool Steel
Grade	AISI S-5
UNS	T41905

Name	IARM-47B
Description	Shock-Resisting Tool Steel
Grade	AISI S-5
UNS	T41905

Name	IARM-259A ↓
Description	Shock-Resisting Tool Steel
Grade	AISI S-7
UNS	T41907

Ag		Na	
Al	0.011	Nb	0.004
As	(0.009)	Nd	
Au		Ni	0.3
B	(0.0012)	O	(0.0027)
Be		P	0.023
Bi		Pb	(<0.005)
C	0.49	Pd	
Ca	(<0.0002)	Pr	
Cd		Pt	
Ce		Re	
Co	0.015	Rh	
Cr	1.31	Ru	
Cu	0.083	S	0.012
Fe		Sb	
Ga		Se	
Gd		Si	0.94
Ge		Sn	0.024
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.16
Li		W	1.84
Mg		Y	
Mn	0.48	Zn	
Mo	0.16	Zr	(<0.005)
N	0.0144		

Ag		Na	
Al	0.011	Nb	0.003
As	(0.01)	Nd	
Au		Ni	0.108
B	0.0003	O	0.002
Be		P	0.019
Bi		Pb	(<0.002)
C	0.45	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.013	Rh	
Cr	1.09	Ru	
Cu	0.147	S	0.004
Fe		Sb	
Ga		Se	
Gd		Si	0.89
Ge		Sn	0.016
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.007
Ir		Tl	
La		V	0.17
Li		W	1.96
Mg		Y	
Mn	0.27	Zn	
Mo	0.222	Zr	
N	0.0069		

Ag		Na	
Al	0.017	Nb	(0.004)
As	(0.014)	Nd	
Au		Ni	0.23
B	(0.0003)	O	(0.0021)
Be		P	0.015
Bi		Pb	(<0.005)
C	0.58	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.009	Rh	
Cr	0.29	Ru	
Cu	0.25	S	0.01
Fe		Sb	(0.003)
Ga		Se	
Gd		Si	1.92
Ge		Sn	0.031
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.008
Ir		Tl	
La		V	0.22
Li		W	(0.016)
Mg		Y	
Mn	0.8	Zn	
Mo	0.41	Zr	(<0.01)
N	0.0084		

Ag		Na	
Al	0.014	Nb	(0.002)
As		Nd	
Au		Ni	0.09
B	(<0.001)	O	(0.0014)
Be		P	0.017
Bi		Pb	(0.0003)
C	0.59	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.007	Rh	
Cr	0.23	Ru	
Cu	0.17	S	0.006
Fe		Sb	
Ga		Se	
Gd		Si	1.96
Ge		Sn	0.008
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.01
Ir		Tl	
La		V	0.17
Li		W	(0.016)
Mg		Y	
Mn	0.79	Zn	
Mo	0.2	Zr	
N	0.0092		

Ag		Na	
Al	0.016	Nb	0.003
As	0.006	Nd	
Au		Ni	0.194
B	0.0003	O	0.0014
Be		P	0.02
Bi		Pb	(<0.0005)
C	0.479	Pd	
Ca	(0.0003)	Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	3.27	Ru	
Cu	0.081	S	0.0007
Fe		Sb	(0.002)
Ga		Se	
Gd		Si	0.44
Ge		Sn	0.004
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	0.0026
Ir		Tl	
La		V	0.256
Li		W	0.035
Mg		Y	
Mn	0.399	Zn	(<0.005)
Mo	1.43	Zr	0.001
N	0.0077		

Tool Steel

Name MBH-14X HS10 A

Description Tool Steel

Grade

UNS

Name MBH-14X 72305 A

Description Water-Hardening Tool steel

Grade AISI W-5

UNS T72305

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	0.146
B		O	
Be		P	0.0135
Bi		Pb	
C	1.71	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0866	Rh	
Cr	14.83	Ru	
Cu	0.0605	S	0.0099
Fe		Sb	
Ga		Se	
Gd		Si	0.66
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	1.142
Li		W	1.75
Mg		Y	
Mn	0.134	Zn	
Mo	1.679	Zr	
N	(0.001)		

Ag		Na	
Al	0.0049	Nb	
As		Nd	
Au		Ni	0.089
B		O	
Be		P	0.0128
Bi		Pb	
C	1.085	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.425	Ru	
Cu	0.149	S	0.0028
Fe		Sb	
Ga		Se	
Gd		Si	0.206
Ge		Sn	0.0101
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0045
Li		W	
Mg		Y	
Mn	0.349	Zn	
Mo	0.0231	Zr	
N	0.0068		

Section 10

Cobalt and Nickel Alloys

Name IARM-Co6B-18
Description Cobalt Alloy
Grade Alloy 6B
UNS R30016

Name IARM-CoElgiloy-18
Description Cobalt Alloy
Grade Elgiloy
UNS R30003

Name IARM-50C
Description Commercially Pure Nickel
Grade Ni 200
UNS N02200

Name IARM-187A
Description High Purity Carbonyl Nickel
Grade HPNI
UNS

Name IARM-190A
Description High Purity Carbonyl Nickel-High
Grade HPNI-HI
UNS

Ag		Na	
Al	0.07	Nb	0.014
As	(<0.01)	Nd	
Au		Ni	2.6
B	(0.0006)	O	(0.001)
Be		P	(0.004)
Bi		Pb	(<0.01)
C	1.02	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd		Pt	
Ce		Re	
Co	58	Rh	
Cr	30.5	Ru	
Cu	0.016	S	(<0.005)
Fe	2.68	Sb	(<0.001)
Ga		Se	(<0.005)
Gd		Si	0.62
Ge		Sn	(<0.01)
H	(<0.001)	Sr	
Hf	(<0.01)	Ta	(<0.02)
Hg		Te	
In		Ti	0.007
Ir		Tl	
La		V	0.011
Li		W	3.92
Mg	(<0.01)	Y	
Mn	1.48	Zn	(<0.01)
Mo	0.02	Zr	(<0.01)
N	0.017		

Ag	(<0.0001)	Na	
Al	0.011	Nb	0.006
As	(<0.022)	Nd	
Au		Ni	15.9
B	0.002	O	0.009
Be	(<0.0001)	P	0.0019
Bi		Pb	(<0.012)
C	0.008	Pd	
Ca	(0.0015)	Pr	
Cd		Pt	
Ce		Re	
Co	40.4	Rh	
Cr	20.4	Ru	
Cu	0.005	S	0.0018
Fe	12.6	Sb	(<0.0001)
Ga		Se	
Gd		Si	0.05
Ge		Sn	(<0.0001)
H		Sr	
Hf	(<0.02)	Ta	(0.01)
Hg		Te	
In		Ti	0.004
Ir		Tl	
La	(<0.0001)	V	0.009
Li		W	0.008
Mg	(<0.002)	Y	(<0.0001)
Mn	2.36	Zn	
Mo	8.6	Zr	(<0.001)
N	0.0034		

Ag	(<0.0001)	Na	(<0.0005)
Al	0.004	Nb	0.002
As	(<0.003)	Nd	
Au		Ni	99.4
B	0.0027	O	(0.006)
Be	(<0.0001)	P	0.0014
Bi	(<0.005)	Pb	(0.001)
C	0.015	Pd	(<0.0001)
Ca	(0.0012)	Pr	
Cd	(<0.0001)	Pt	
Ce	(<0.0001)	Re	(<0.01)
Co	0.011	Rh	
Cr	0.005	Ru	(<0.0001)
Cu	0.028	S	0.0012
Fe	0.084	Sb	(<0.007)
Ga	(<0.0001)	Se	(<0.0002)
Gd		Si	0.031
Ge	(<0.0001)	Sn	(<0.001)
H		Sr	
Hf	(<0.01)	Ta	(<0.03)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.026
Ir		Tl	
La	(<0.0001)	V	(0.0006)
Li		W	(<0.1)
Mg	0.005	Y	(<0.0005)
Mn	0.22	Zn	(0.00009)
Mo	(<0.023)	Zr	(<0.003)
N	(0.0005)		

Ag	0.00001	Na	
Al	0.0011	Nb	
As	0.00001	Nd	
Au		Ni	
B	(<0.0005)	O	
Be	(<0.0001)	P	
Bi	(<0.00001)	Pb	
C	0.0013	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.00001)	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag	0.00109	Na	
Al	0.005	Nb	
As	0.0028	Nd	
Au		Ni	
B	(<0.0005)	O	
Be	(<0.0001)	P	
Bi	0.00111	Pb	
C	0.0022	Pd	
Ca	(<0.001)	Pr	
Cd	0.0005	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Cobalt and Nickel Alloys

Name IARM-188A
Description High Purity Carbonyl Nickel-Low
Grade HPNI-LO
UNS

Ag	0.00011	Na	
Al	0.0024	Nb	
As	0.00007	Nd	
Au		Ni	
B	(<0.0005)	O	
Be	(<0.0001)	P	
Bi	0.00009	Pb	
C	0.0022	Pd	
Ca	(<0.001)	Pr	
Cd	0.00002	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name IARM-189A
Description High Purity Carbonyl Nickel-Mid
Grade HPNI-MI
UNS

Ag	0.00024	Na	
Al	0.0044	Nb	
As	0.00007	Nd	
Au		Ni	
B	(<0.0005)	O	
Be	(<0.0001)	P	
Bi	0.00026	Pb	
C	0.0023	Pd	
Ca	(<0.001)	Pr	
Cd	0.00008	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name IARM-191A
Description High Purity Electrolytic Nickel
Grade ELNI-HP
UNS

Ag	0.00001	Na	
Al	0.00015	Nb	
As	0.0013	Nd	
Au		Ni	
B	(<0.0005)	O	
Be	(<0.0001)	P	
Bi	(<0.00001)	Pb	
C	0.0014	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name IARM-NiNi55-18 ♦
Description Nickel Alloy N-155
Grade N-155
UNS NR30155

Ag		Na	
Al	0.153	Nb	1
As		Nd	
Au		Ni	20.1
B	0.0024	O	(0.001)
Be		P	0.008
Bi		Pb	
C	0.116	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	(<0.010)
Co	19.2	Rh	
Cr	20.9	Ru	
Cu	0.039	S	(0.0009)
Fe	31.4	Sb	
Ga		Se	
Gd		Si	0.55
Ge		Sn	(<0.005)
H	(0.0004)	Sr	
Hf		Ta	(0.001)
Hg		Te	
In		Ti	0.0026
Ir		Tl	
La		V	0.0236
Li		W	2.42
Mg	(0.0008)	Y	
Mn	1.46	Zn	
Mo	2.87	Zr	0.0057
N	0.12		

Name IARM-NIS-18 ♦
Description Nickel Alloy S
Grade Alloy S
UNS N06635

Ag		Na	
Al	0.388	Nb	(0.003)
As		Nd	
Au		Ni	65.6
B	0.0061	O	(0.0007)
Be		P	0.006
Bi		Pb	
C	0.012	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.416	Rh	
Cr	15.62	Ru	
Cu		S	(<0.001)
Fe	0.81	Sb	
Ga		Se	
Gd		Si	0.49
Ge		Sn	
H	(0.002)	Sr	
Hf	(<0.020)	Ta	(0.002)
Hg		Te	
In		Ti	0.0023
Ir		Tl	
La	0.031	V	0.0027
Li		W	0.36
Mg	0.0021	Y	
Mn	0.65	Zn	
Mo	15.4	Zr	
N	(0.012)		

Cobalt and Nickel Alloys

Name	IARM-Ni718-20 ♦
Description	Nickel Chromium Alloy
Grade	Alloy 718
UNS	N07718

Name	IARM-53F
Description	Nickel-Chromium Alloy
Grade	Alloy 600
UNS	N06600

Name	IARM-NiX-18
Description	Nickel-Chromium Alloy
Grade	Alloy X
UNS	N06002

Name	IARM-57E
Description	Nickel-Chromium Alloy
Grade	Alloy X750
UNS	N07750

Name	IARM-61A ↓
Description	Nickel-Chromium Alloy
Grade	Haynes 214
UNS	N07214

Ag		Na	
Al	0.54	Nb	5.24
As		Nd	
Au		Ni	53.3
B	0.0039	O	(0.0008)
Be		P	0.0032
Bi		Pb	0.00015
C	0.028	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.066	Rh	
Cr	18.5	Ru	
Cu	0.025	S	(0.003)
Fe	18.1	Sb	
Ga		Se	(<0.005)
Gd		Si	0.044
Ge		Sn	(0.001)
H	(0.0002)	Sr	
Hf		Ta	0.006
Hg		Te	
In		Ti	0.94
Ir		Tl	
La		V	0.016
Li		W	0.013
Mg	0.0025	Y	
Mn	0.027	Zn	
Mo	3.01	Zr	(0.005)
N	0.009		

Ag	(<0.0001)	Na	(<0.0005)
Al	0.17	Nb	0.088
As	(<0.001)	Nd	
Au		Ni	72.7
B	0.0026	O	(0.001)
Be	(<0.0001)	P	0.007
Bi	(<0.0001)	Pb	(0.0006)
C	0.077	Pd	(<0.0001)
Ca	(<0.001)	Pr	
Cd	(<0.0003)	Pt	
Ce	(<0.0001)	Re	(<0.0001)
Co	0.056	Rh	
Cr	16	Ru	(<0.0001)
Cu	0.077	S	0.0022
Fe	9.5	Sb	(0.00011)
Ga	(0.0016)	Se	(<0.001)
Gd		Si	0.17
Ge	(<0.0008)	Sn	0.002
H		Sr	
Hf	(<0.0001)	Ta	0.004
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.255
Ir		Tl	
La	(<0.0001)	V	0.024
Li		W	0.014
Mg	0.016	Y	(<0.0001)
Mn	0.26	Zn	(<0.002)
Mo	0.084	Zr	(0.002)
N	(0.007)		

Ag	(0.00017)	Na	(<0.0001)
Al	0.24	Nb	0.024
As	(0.002)	Nd	
Au		Ni	46.9
B	0.0038	O	0.0012
Be	(<0.0001)	P	0.0107
Bi	(<0.001)	Pb	(<0.00008)
C	0.08	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce	(<0.0001)	Re	(<0.004)
Co	1.43	Rh	
Cr	22	Ru	(<0.0001)
Cu	0.046	S	(0.005)
Fe	19.2	Sb	(0.00027)
Ga	(<0.003)	Se	(<0.005)
Gd		Si	0.49
Ge	(<0.0007)	Sn	(0.0017)
H	(<0.0003)	Sr	
Hf	(<0.005)	Ta	(<0.005)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.017
Ir		Tl	
La	(<0.0001)	V	0.037
Li		W	0.55
Mg	0.003	Y	(<0.001)
Mn	0.215	Zn	(<0.001)
Mo	8.6	Zr	(<0.005)
N	0.042		

Ag	(0.00002)	Na	(<0.0001)
Al	0.74	Nb	1
As	(0.0004)	Nd	
Au		Ni	72.1
B	0.008	O	(0.0012)
Be	(<0.0001)	P	0.005
Bi	(0.000002)	Pb	(0.0003)
C	0.06	Pd	(<0.0001)
Ca	(<0.0005)	Pr	
Cd	(<0.0001)	Pt	
Ce	(<0.0001)	Re	(<0.004)
Co	0.021	Rh	
Cr	15.3	Ru	(<0.0002)
Cu	0.01	S	0.0009
Fe	8.01	Sb	(0.00007)
Ga	(0.0013)	Se	(<0.0006)
Gd		Si	0.052
Ge	(0.0001)	Sn	(<0.016)
H		Sr	
Hf	(<0.004)	Ta	(<0.023)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	2.54
Ir		Tl	
La	(0.00002)	V	0.021
Li		W	0.009
Mg	0.0013	Y	(<0.002)
Mn	0.079	Zn	(<0.005)
Mo	0.014	Zr	0.037
N	(0.0025)		

Ag		Na	
Al	4.42	Nb	(0.01)
As		Nd	
Au		Ni	(75.62)
B	0.005	O	
Be		P	0.003
Bi		Pb	(<0.001)
C	0.042	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.01)	Rh	
Cr	16.12	Ru	
Cu	(0.01)	S	0.001
Fe	3.57	Sb	
Ga		Se	
Gd		Si	0.02
Ge		Sn	(<0.001)
H		Sr	
Hf		Ta	(<0.01)
Hg		Te	
In		Ti	(<0.01)
Ir		Tl	
La		V	(<0.01)
Li		W	(<0.01)
Mg	(<0.002)	Y	
Mn	0.17	Zn	
Mo	(<0.01)	Zr	0.02
N			

Cobalt and Nickel Alloys

Name IARM-NiH214-18
Description Nickel-Chromium Alloy
Grade Haynes 214
UNS N07214

Name MBH-22X 804 D ↓
Description Nickel-Chromium Alloy
Grade Nimonic Type Alloy
UNS

Name MBH-22X 904 C
Description Nickel-Chromium Alloy
Grade Nimonic Type Alloy
UNS

Name IARM-287A
Description Nickel-Chromium Alloy
Grade Udimet 500
UNS N07500

Name IARM-NiWasp-18
Description Nickel-Chromium Alloy
Grade Waspaloy
UNS N07001

Ag	<0.0002	Na	<0.0001
Al	4.28	Nb	0.003
As	(0.0003)	Nd	
Au		Ni	75.6
B	0.0033	O	(0.001)
Be	<0.0001	P	0.0017
Bi	<0.0001	Pb	<0.001
C	0.036	Pd	<0.001
Ca	<0.005	Pr	
Cd	<0.005	Pt	
Ce	<0.0001	Re	<0.005
Co	0.007	Rh	
Cr	16.24	Ru	<0.002
Cu	0.0011	S	(0.0004)
Fe	3.48	Sb	<0.001
Ga	<0.002	Se	<0.005
Gd		Si	0.02
Ge	<0.0001	Sn	<0.0001
H	<0.0002	Sr	
Hf	<0.005	Ta	(0.0001)
Hg		Te	<0.0001
In	<0.0001	Ti	0.003
Ir		Tl	
La	<0.0001	V	0.003
Li		W	0.02
Mg	0.0053	Y	0.008
Mn	0.185	Zn	<0.0002
Mo	0.004	Zr	0.026
N	0.0026		

Ag		Na	
Al	1.33	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C	0.07	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.2	Rh	
Cr	19.72	Ru	
Cu	0.21	S	
Fe	0.66	Sb	
Ga		Se	
Gd		Si	0.56
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	2.34
Ir		Tl	
La		V	
Li		W	
Mg	0.004	Y	
Mn	0.54	Zn	
Mo	0.09	Zr	
N			

Ag		Na	
Al	1.29	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C	0.08	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	16.9	Rh	
Cr	19.9	Ru	
Cu	0.1	S	
Fe	0.25	Sb	
Ga		Se	
Gd		Si	0.52
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	2.26
Ir		Tl	
La		V	
Li		W	
Mg	0.005	Y	
Mn	0.5	Zn	
Mo	0.21	Zr	
N			

Ag		Na	
Al	3.02	Nb	0.022
As		Nd	
Au		Ni	54.8
B	0.009	O	0.0005
Be		P	0.001
Bi		Pb	
C	0.079	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	16.99	Rh	
Cr	18.47	Ru	
Cu	(0.001)	S	0.0008
Fe	0.086	Sb	
Ga		Se	
Gd		Si	0.02
Ge		Sn	0.0002
H		Sr	
Hf		Ta	0.01
Hg		Te	
In		Ti	3.02
Ir		Tl	
La		V	0.004
Li		W	0.013
Mg	0.0023	Y	
Mn	0.002	Zn	
Mo	3.51	Zr	0.008
N	0.0007		

Ag	<0.0004	Na	<0.0001
Al	1.36	Nb	0.033
As	<0.005	Nd	
Au		Ni	57.8
B	0.0061	O	0.0009
Be	<0.0001	P	0.0032
Bi	<0.001	Pb	<0.002
C	0.038	Pd	<0.001
Ca	<0.005	Pr	
Cd	<0.005	Pt	
Ce	<0.0001	Re	<0.0001
Co	13.13	Rh	
Cr	19.7	Ru	<0.0001
Cu	0.009	S	(0.0004)
Fe	0.69	Sb	(0.00008)
Ga	<0.003	Se	<0.005
Gd		Si	0.028
Ge	<0.0001	Sn	(0.0005)
H	<0.0002	Sr	
Hf	<0.002	Ta	0.005
Hg		Te	<0.0001
In	<0.0001	Ti	3.01
Ir		Tl	
La	<0.0001	V	0.023
Li		W	0.03
Mg	0.0018	Y	<0.002
Mn	0.022	Zn	<0.001
Mo	4.28	Zr	0.058
N	0.0046		

Cobalt and Nickel Alloys

Name MBH-219X 20500 C ↓
Description Nickel-Chromium Alloy
Grade
UNS

Name IARM-358A
Description Nickel-Chromium Alloy
Grade Alloy 740
UNS

Name MBH-24X 07001 C
Description Nickel-Chromium-Cobalt Alloy
Grade Waspalloy Type Alloy
UNS

Name IARM-272A ↓
Description Nickel-Chromium-Cobalt-Molybdenum Alloy
Grade Alloy 617
UNS N06617

Name IARM-Ni617-18
Description Nickel-Chromium-Cobalt-Molybdenum Alloy
Grade Alloy 617
UNS N06617

Ag		Na	
Al		Nb	0.0117
As		Nd	
Au		Ni	45.45
B		O	
Be		P	0.0048
Bi		Pb	
C	0.0212	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.011	Rh	
Cr	51.1	Ru	
Cu	0.0101	S	0.0137
Fe	1.515	Sb	
Ga		Se	
Gd		Si	1.29
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	0.0086
Mg		Y	
Mn	0.3	Zn	
Mo	0.0103	Zr	
N	0.199		

Ag	(<0.0001)	Na	
Al	1.33	Nb	1.51
As	(<0.01)	Nd	
Au		Ni	50.3
B	0.0011	O	0.001
Be		P	0.004
Bi	(<0.002)	Pb	(<0.005)
C	0.026	Pd	
Ca	(0.001)	Pr	
Cd	(<0.0005)	Pt	
Ce		Re	
Co	20.1	Rh	
Cr	24.6	Ru	
Cu	0.005	S	0.0018
Fe	0.122	Sb	(<0.001)
Ga		Se	
Gd		Si	0.145
Ge		Sn	(<0.001)
H		Sr	
Hf	(<0.0003)	Ta	(0.006)
Hg		Te	
In		Ti	1.36
Ir		Tl	
La		V	0.009
Li		W	0.002
Mg	0.0019	Y	
Mn	0.259	Zn	
Mo	0.31	Zr	0.022
N	0.0045		

Ag		Na	
Al	1.476	Nb	0.05
As		Nd	
Au		Ni	56.92
B	0.0062	O	
Be		P	0.0023
Bi		Pb	
C	0.036	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	13.2	Rh	
Cr	19.62	Ru	
Cu	0.0118	S	0.0005
Fe	1.023	Sb	
Ga		Se	
Gd		Si	0.042
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	3.14
Ir		Tl	
La		V	
Li		W	0.041
Mg		Y	
Mn	0.024	Zn	
Mo	4.31	Zr	0.06
N			

Ag	(0.0001)	Na	
Al	1.16	Nb	0.015
As	(0.0002)	Nd	
Au		Ni	52.68
B	0.003	O	0.0007
Be		P	0.003
Bi	(<0.00001)	Pb	(0.0001)
C	0.082	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	12.89	Rh	
Cr	21.98	Ru	
Cu	0.015	S	0.0002
Fe	1.1	Sb	(0.0001)
Ga		Se	
Gd		Si	0.07
Ge		Sn	(0.0003)
H		Sr	
Hf		Ta	(0.01)
Hg		Te	
In		Ti	0.5
Ir		Tl	
La		V	0.005
Li		W	0.061
Mg	0.002	Y	
Mn	0.067	Zn	
Mo	9.34	Zr	0.002
N	0.0049		

Ag	(<0.0005)	Na	(<0.0001)
Al	1.08	Nb	0.197
As	(<0.005)	Nd	
Au		Ni	53.3
B	0.0023	O	0.001
Be	(<0.0001)	P	0.004
Bi	(<0.001)	Pb	(<0.001)
C	0.079	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.028)	Pt	
Ce	(<0.0001)	Re	(<0.02)
Co	11.81	Rh	
Cr	21.9	Ru	(<0.0001)
Cu	0.009	S	0.0007
Fe	1.45	Sb	(<0.001)
Ga	(<0.002)	Se	(<0.005)
Gd		Si	0.21
Ge	(<0.0001)	Sn	(<0.006)
H	(<0.0002)	Sr	
Hf	(<0.01)	Ta	(<0.009)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.32
Ir		Tl	
La	(<0.0001)	V	0.006
Li		W	0.02
Mg	0.0011	Y	(<0.001)
Mn	0.24	Zn	(<0.001)
Mo	9.33	Zr	0.06
N	0.0082		

Cobalt and Nickel Alloys

Name	IARM-60A ↓
Description	Nickel-Chromium-Iron Alloy
Grade	Alloy 333
UNS	N06333

Name	IARM-366A
Description	Nickel-Chromium-Iron Alloy
Grade	Alloy 601
UNS	N06601

Name	IARM-338A
Description	Nickel-Chromium-Iron Alloy
Grade	Alloy 602CA
UNS	N06025

Name	IARM-Ni690-18
Description	Nickel-Chromium-Iron Alloy
Grade	Alloy 690
UNS	N06690

Name	IARM-372A
Description	Nickel-Chromium-Iron Alloy
Grade	Alloy 693
UNS	N06693

Ag		Na	
Al	0.08	Nb	
As		Nd	
Au		Ni	(44.2)
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	3.02	Rh	
Cr	25.72	Ru	
Cu	0.1	S	0.001
Fe	17.71	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.03
Ir		Tl	
La		V	0.07
Li		W	2.98
Mg		Y	
Mn	1.5	Zn	
Mo		Zr	
N	0.044		

Ag	(<0.00001)	Na	
Al	1.51	Nb	0.069
As		Nd	
Au		Ni	60.9
B	(0.0026)	O	0.001
Be		P	0.008
Bi	(<0.0001)	Pb	(<0.003)
C	0.025	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.041	Rh	
Cr	22	Ru	
Cu	0.038	S	0.0003
Fe	14.3	Sb	
Ga		Se	
Gd		Si	0.019
Ge		Sn	(<0.005)
H		Sr	
Hf	(<0.06)	Ta	(<0.02)
Hg		Te	
In		Ti	0.43
Ir		Tl	
La		V	0.028
Li		W	0.02
Mg	0.004	Y	(<0.0001)
Mn	0.205	Zn	
Mo	0.079	Zr	0.012
N	0.0136		

Ag	(0.0001)	Na	
Al	2.13	Nb	0.004
As	(<0.0005)	Nd	
Au		Ni	62.3
B	0.0049	O	0.001
Be		P	0.003
Bi	(<0.0001)	Pb	0.00007
C	0.168	Pd	
Ca	0.002	Pr	
Cd		Pt	
Ce		Re	
Co	0.035	Rh	
Cr	25	Ru	
Cu	0.0059	S	0.0008
Fe	9.74	Sb	(0.00009)
Ga		Se	
Gd		Si	0.02
Ge		Sn	0.00037
H		Sr	
Hf		Ta	(0.002)
Hg		Te	
In		Ti	0.13
Ir		Tl	
La		V	0.0026
Li		W	(<0.02)
Mg	0.0058	Y	0.06
Mn	0.052	Zn	
Mo	0.0017	Zr	0.081
N	0.0276		

Ag		Na	
Al	0.25	Nb	0.007
As	(<0.001)	Nd	
Au		Ni	59.8
B	(<0.03)	O	(0.0002)
Be		P	0.004
Bi	(<0.0001)	Pb	(0.001)
C	0.025	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	(<0.01)
Co	0.013	Rh	
Cr	29.1	Ru	
Cu	0.012	S	0.0007
Fe	10	Sb	(<0.0001)
Ga		Se	
Gd		Si	0.049
Ge		Sn	(<0.003)
H		Sr	
Hf	(<0.07)	Ta	(<0.006)
Hg		Te	
In		Ti	0.324
Ir		Tl	
La		V	0.048
Li		W	0.003
Mg	0.003	Y	
Mn	0.154	Zn	
Mo	0.013	Zr	(0.002)
N	0.012		

Ag	(<0.0002)	Na	
Al	3.28	Nb	0.71
As	(<0.0002)	Nd	
Au		Ni	63.6
B	0.0016	O	0.0008
Be		P	0.003
Bi	(<0.0001)	Pb	(0.001)
C	0.03	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	(<0.003)
Co	0.009	Rh	
Cr	28.3	Ru	
Cu	0.004	S	0.0016
Fe	3.12	Sb	(0.056)
Ga		Se	
Gd		Si	0.02
Ge		Sn	(0.001)
H		Sr	
Hf	(0.03)	Ta	(<0.022)
Hg		Te	
In		Ti	0.486
Ir		Tl	
La	(<0.0001)	V	0.008
Li		W	0.02
Mg	0.016	Y	(<0.0001)
Mn	0.285	Zn	(<0.001)
Mo	0.006	Zr	0.017
N	0.011		

Cobalt and Nickel Alloys

Name IARM-67C
Description Nickel-Chromium-Iron Alloy
Grade Alloy G-30
UNS N06030

Name IARM-NiPE16-18
Description Nickel-Chromium-Iron Alloy
Grade Alloy PE16
UNS

Name MBH-28X 06625 A ↓
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Name MBH-28X 6001 G
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Name MBH-28X 6002 F
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Ag		Na	
Al	0.14	Nb	0.36
As		Nd	
Au		Ni	45.8
B	0.001	O	0.0016
Be		P	0.011
Bi		Pb	
C	0.0058	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	1.75	Rh	
Cr	28.9	Ru	
Cu	1.24	S	0.0006
Fe	13.48	Sb	(0.0003)
Ga		Se	
Gd		Si	0.14
Ge		Sn	0.0014
H		Sr	
Hf		Ta	(0.006)
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	0.031
Li		W	1.97
Mg	0.0069	Y	
Mn	1.01	Zn	
Mo	4.93	Zr	0.002
N	0.035		

Ag	(<0.0005)	Na	(<0.0001)
Al	1.2	Nb	0.04
As	(<0.005)	Nd	
Au		Ni	42.9
B	0.0028	O	0.0006
Be	(<0.0001)	P	0.006
Bi	(<0.001)	Pb	(<0.008)
C	0.052	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.009)	Pt	
Ce	(<0.0001)	Re	(<0.0001)
Co	0.77	Rh	
Cr	16.6	Ru	(<0.0001)
Cu	0.053	S	0.0007
Fe	34.4	Sb	(<0.001)
Ga	(<0.002)	Se	(<0.005)
Gd		Si	0.13
Ge	(<0.0003)	Sn	(<0.007)
H	(<0.0003)	Sr	
Hf	(<0.05)	Ta	(<0.03)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	1.18
Ir		Tl	
La	(<0.0001)	V	0.018
Li		W	0.038
Mg	(<0.003)	Y	(<0.001)
Mn	0.122	Zn	(<0.004)
Mo	3.29	Zr	0.019
N	0.006		

Ag		Na	
Al	0.184	Nb	3.52
As		Nd	
Au		Ni	63.49
B	0.0009	O	
Be		P	(0.002)
Bi		Pb	
C	0.02	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.031	Rh	
Cr	21.94	Ru	
Cu	0.0288	S	0.0037
Fe	0.917	Sb	
Ga		Se	
Gd		Si	0.273
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.238
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.09	Zn	
Mo	9.15	Zr	
N	0.0219		

Ag		Na	
Al	0.02	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	1.02	Rh	
Cr	16.38	Ru	
Cu	0.83	S	
Fe	6.33	Sb	
Ga		Se	
Gd		Si	0.95
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.58
Ir		Tl	
La		V	
Li		W	
Mg	0.01	Y	
Mn	0.12	Zn	
Mo		Zr	
N			

Ag		Na	
Al	0.18	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.22	Rh	
Cr	16.23	Ru	
Cu	0.02	S	
Fe	8.24	Sb	
Ga		Se	
Gd		Si	0.25
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.12
Ir		Tl	
La		V	
Li		W	
Mg	0.004	Y	
Mn	0.65	Zn	
Mo		Zr	
N			

Cobalt and Nickel Alloys

Name MBH-28X 6004 E
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Ag		Na	
Al	0.05	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.77	Rh	
Cr	16.21	Ru	
Cu	0.42	S	
Fe	7.17	Sb	
Ga		Se	
Gd		Si	0.65
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.27
Ir		Tl	
La		V	
Li		W	
Mg	0.008	Y	
Mn	0.38	Zn	
Mo		Zr	
N			

Name MBH-28X 6251 M
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Ag		Na	
Al	0.006	Nb	2.64
As		Nd	
Au		Ni	62.95
B	0.004	O	
Be		P	0.0023
Bi		Pb	
C	0.002	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0078	Rh	
Cr	20.24	Ru	
Cu	0.057	S	0.0013
Fe	4.21	Sb	
Ga		Se	
Gd		Si	0.252
Ge		Sn	
H		Sr	
Hf		Ta	0.0111
Hg		Te	
In		Ti	0.0097
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.069	Zn	
Mo	9.58	Zr	
N			

Name MBH-28X 6253 T
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Ag		Na	
Al	(0.19)	Nb	4.5
As		Nd	
Au		Ni	(56.8)
B		O	
Be		P	0.0242
Bi		Pb	
C	0.116	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.39	Rh	
Cr	21.91	Ru	
Cu	0.306	S	0.0106
Fe	5.62	Sb	
Ga		Se	
Gd		Si	1.32
Ge		Sn	
H		Sr	
Hf		Ta	0.039
Hg		Te	
In		Ti	0.247
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.49	Zn	
Mo	7.82	Zr	
N	0.092		

Name MBH-28X 6256 A
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Ag		Na	
Al	0.301	Nb	3.75
As		Nd	
Au		Ni	65.4
B		O	
Be		P	0.0033
Bi		Pb	
C	0.0173	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	21.29	Ru	
Cu	0.018	S	(0.002)
Fe	(0.034)	Sb	
Ga		Se	
Gd		Si	0.041
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.266
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0004	Zn	
Mo	8.81	Zr	
N	0.007		

Name MBH-28X 7181 K
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Ag		Na	
Al	0.07	Nb	4.88
As		Nd	
Au		Ni	53.1
B	0.0021	O	
Be		P	0.0146
Bi		Pb	
C	0.0198	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.014)	Rh	
Cr	18.37	Ru	
Cu	0.042	S	0.0089
Fe	18.98	Sb	
Ga		Se	
Gd		Si	0.811
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.125
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.15	Zn	
Mo	3.25	Zr	
N	0.038		

Cobalt and Nickel Alloys

Name MBH-28X 7186 K
Description Nickel-Chromium-Iron Alloy
Grade Inconel Type Alloy
UNS

Ag		Na	
Al	0.664	Nb	5.07
As		Nd	
Au		Ni	(55.3)
B	0.0048	O	
Be		P	0.0192
Bi		Pb	
C	0.0237	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.301	Rh	
Cr	17.55	Ru	
Cu	0.109	S	0.0096
Fe	15.97	Sb	
Ga		Se	
Gd		Si	0.562
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.91
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.238	Zn	
Mo	3.16	Zr	
N	0.04		

Name MBH-219X 86182 B
Description Nickel-Chromium-Iron Alloy
Grade
UNS

Ag		Na	
Al		Nb	2.17
As		Nd	
Au		Ni	64.7
B		O	
Be		P	0.0098
Bi		Pb	
C	0.148	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.047	Rh	
Cr	15.88	Ru	
Cu	0.15	S	0.0034
Fe	7.88	Sb	
Ga		Se	
Gd		Si	0.83
Ge		Sn	
H		Sr	
Hf		Ta	0.031
Hg		Te	
In		Ti	0.4
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	7.68	Zn	
Mo	0.078	Zr	
N			

Name IARM-54H
Description Nickel-Chromium-Molybdenum Alloy
Grade Alloy 625
UNS N06625

Ag	(0.1)	Na	
Al	0.31	Nb	3.51
As	(14)	Nd	
Au		Ni	60.7
B	0.0018	O	(0.0005)
Be		P	0.0069
Bi		Pb	(0.0003)
C	0.018	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.099	Rh	
Cr	21.97	Ru	
Cu	0.102	S	0.001
Fe	4.03	Sb	
Ga		Se	
Gd		Si	0.144
Ge		Sn	(<0.001)
H		Sr	
Hf	(0.003)	Ta	(<0.03)
Hg		Te	
In		Ti	0.286
Ir		Tl	
La		V	(<0.02)
Li		W	(<0.08)
Mg	(0.0007)	Y	
Mn	0.105	Zn	
Mo	8.69	Zr	(<0.002)
N	(0.0109)		

Name IARM-347A
Description Nickel-Chromium-Molybdenum Alloy
Grade Alloy 904L
UNS N08904

Ag	(0.0001)	Na	
Al	0.016	Nb	0.01
As	0.006	Nd	
Au		Ni	24.88
B	0.002	O	0.0026
Be		P	0.023
Bi	(0.00001)	Pb	0.0003
C	0.023	Pd	
Ca	0.0029	Pr	
Cd		Pt	
Ce		Re	
Co	0.083	Rh	
Cr	20.14	Ru	
Cu	1.34	S	0.0009
Fe	47.4	Sb	0.0013
Ga		Se	
Gd		Si	0.56
Ge		Sn	0.011
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	0.007
Ir		Tl	
La	(0.0006)	V	0.078
Li		W	0.02
Mg	0.0008	Y	
Mn	1.24	Zn	
Mo	4.16	Zr	(0.002)
N	0.062		

Name IARM-65D
Description Nickel-Chromium-Molybdenum Alloy
Grade Alloy C-22
UNS N06022

Ag	(0.0001)	Na	
Al	0.29	Nb	0.033
As		Nd	
Au		Ni	56.8
B	(0.001)	O	0.0005
Be		P	0.008
Bi		Pb	
C	0.0021	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	1.22	Rh	
Cr	21.5	Ru	
Cu	0.05	S	0.0004
Fe	3.66	Sb	
Ga		Se	
Gd		Si	0.035
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	(0.01)
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	0.012
Li		W	2.81
Mg	0.007	Y	
Mn	0.28	Zn	
Mo	13.1	Zr	(0.002)
N	0.019		

Cobalt and Nickel Alloys

Name IARM-276A
Description Nickel-Chromium-Molybdenum Alloy
Grade Alloy C-22HS
UNS N27022

Name IARM-329A
Description Nickel-Chromium-Molybdenum Alloy
Grade Alloy G-35
UNS N06035

Name MBH-26X 11384 E
Description Nickel-Chromium-Molybdenum Alloy
Grade
UNS

Name MBH-27X 14184 F
Description Nickel-Chromium-Molybdenum-Cobalt Alloy
Grade
UNS

Name MBH-27X 14188 D ↓
Description Nickel-Chromium-Molybdenum-Cobalt Alloy
Grade
UNS

Ag	0.0001	Na	
Al	0.245	Nb	0.014
As	(0.0009)	Nd	
Au		Ni	61.1
B	0.0038	O	0.001
Be		P	0.006
Bi	(0.000003)	Pb	0.00004
C	0.004	Pd	
Ca	(<0.007)	Pr	
Cd		Pt	
Ce		Re	
Co	0.041	Rh	
Cr	20.54	Ru	
Cu	0.038	S	0.0005
Fe	1.3	Sb	0.00019
Ga		Se	
Gd		Si	0.043
Ge		Sn	0.0004
H		Sr	
Hf		Ta	0.011
Hg		Te	
In		Ti	0.004
Ir		Tl	
La	(<0.007)	V	0.008
Li		W	0.03
Mg	0.007	Y	
Mn	0.305	Zn	
Mo	16.2	Zr	0.003
N	0.0388		

Ag	0.00007	Na	
Al	0.29	Nb	0.131
As	0.0009	Nd	
Au		Ni	55.8
B	0.001	O	0.0027
Be		P	0.0059
Bi	(<0.0001)	Pb	0.00003
C	0.0086	Pd	
Ca	(<0.006)	Pr	
Cd		Pt	
Ce		Re	
Co	0.052	Rh	
Cr	33.7	Ru	
Cu	0.065	S	0.0003
Fe	0.92	Sb	0.00013
Ga		Se	
Gd		Si	0.053
Ge		Sn	0.0005
H		Sr	
Hf		Ta	(<0.008)
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	0.009
Li		W	0.021
Mg	0.0124	Y	
Mn	0.222	Zn	
Mo	8.38	Zr	0.0012
N	0.073		

Ag		Na	
Al	0.5	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.3	Rh	
Cr	20.5	Ru	
Cu	0.12	S	
Fe	0.98	Sb	
Ga		Se	
Gd		Si	0.15
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	2.6
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.13	Zn	
Mo	10.2	Zr	
N			

Ag		Na	
Al	0.02	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	10.5	Rh	
Cr	21.8	Ru	
Cu	0.09	S	
Fe	0.4	Sb	
Ga		Se	
Gd		Si	0.41
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.02
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.4	Zn	
Mo	10.7	Zr	
N			

Ag		Na	
Al	<0.01	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	10.4	Rh	
Cr	21.17	Ru	
Cu	(0.003)	S	
Fe	0.44	Sb	
Ga		Se	
Gd		Si	0.33
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.03
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.3	Zn	
Mo	10.3	Zr	
N			

Cobalt and Nickel Alloys

Name	IARM-274A		
Description	Nickel-Chromium-Molybdenum-Niobium Alloy		
Grade	Alloy 725		
UNS	N07725		

Name	IARM-Ni725-18		
Description	Nickel-Chromium-Molybdenum-Niobium Alloy		
Grade	Alloy 725		
UNS	N07725		

Name	IARM-362B		
Description	Nickel-Chromium-Molybdenum-Tungsten Alloy		
Grade	Alloy 686		
UNS	N06686		

Name	IARM-68E		
Description	Nickel-Chromium-Molybdenum-Tungsten Alloy		
Grade	Haynes 230		
UNS	N06230		

Name	IARM-68F		
Description	Nickel-Chromium-Tungsten-Molybdenum Alloy		
Grade	Haynes 230		
UNS	N06230		

Ag		Na	
Al	0.26	Nb	3.48
As		Nd	
Au		Ni	57.5
B	0.002	O	0.0006
Be		P	0.007
Bi		Pb	
C	0.007	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.143	Rh	
Cr	21	Ru	
Cu	0.1	S	0.0004
Fe	7.6	Sb	
Ga		Se	
Gd		Si	0.02
Ge		Sn	0.001
H		Sr	
Hf		Ta	(0.002)
Hg		Te	
In		Ti	1.55
Ir		Tl	
La		V	0.019
Li		W	0.06
Mg	0.0019	Y	
Mn	0.08	Zn	
Mo	8.06	Zr	(0.001)
N	0.007		

Ag		Na	
Al	0.22	Nb	3.47
As	(<0.002)	Nd	
Au		Ni	58.4
B	0.0023	O	(0.0005)
Be		P	0.0047
Bi	(<0.0001)	Pb	(<0.001)
C	0.008	Pd	
Ca	(<0.001)	Pr	
Cd		Pt	
Ce		Re	(<0.01)
Co	0.077	Rh	
Cr	20.5	Ru	
Cu	0.103	S	0.0008
Fe	7.47	Sb	(<0.0001)
Ga		Se	
Gd		Si	0.084
Ge		Sn	0.0011
H		Sr	
Hf	(<0.0102)	Ta	0.006
Hg		Te	
In		Ti	1.55
Ir		Tl	
La		V	0.013
Li		W	0.04
Mg	0.005	Y	(<0.01)
Mn	0.076	Zn	(<0.003)
Mo	7.9	Zr	(<0.005)
N	0.008		

Ag	(<0.0001)	Na	
Al	0.32	Nb	0.015
As	(<0.01)	Nd	
Au		Ni	58.7
B	(0.003)	O	0.0006
Be		P	0.005
Bi	(<0.001)	Pb	(<0.004)
C	0.0079	Pd	
Ca	(<0.001)	Pr	
Cd	(<0.0005)	Pt	
Ce		Re	
Co	0.01	Rh	
Cr	20.4	Ru	
Cu	(0.003)	S	0.0004
Fe	0.1	Sb	(<0.013)
Ga		Se	(<0.005)
Gd		Si	0.04
Ge		Sn	(<0.003)
H		Sr	
Hf	(<0.01)	Ta	(0.005)
Hg		Te	
In		Ti	0.052
Ir		Tl	
La		V	0.01
Li		W	3.9
Mg	0.008	Y	(<0.0001)
Mn	0.229	Zn	(<0.001)
Mo	16.1	Zr	(0.004)
N	0.006		

Ag	(0.00005)	Na	(<0.004)
Al	0.3	Nb	0.035
As	(0.0003)	Nd	
Au		Ni	(59.9)
B	0.007	O	0.0007
Be	(<0.0001)	P	0.005
Bi	(0.000004)	Pb	(0.0002)
C	0.099	Pd	(<0.0001)
Ca	(0.00002)	Pr	
Cd	(<0.002)	Pt	
Ce	(<0.0001)	Re	(0.0003)
Co	0.16	Rh	
Cr	21.88	Ru	(<0.0001)
Cu	0.022	S	0.0005
Fe	1.06	Sb	(0.00006)
Ga	(<0.003)	Se	(<0.0007)
Gd		Si	0.39
Ge	(<0.0001)	Sn	(0.0004)
H		Sr	
Hf	(<0.002)	Ta	(<0.015)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.015
Ir		Tl	
La	0.008	V	0.007
Li		W	14.6
Mg	0.006	Y	(<0.001)
Mn	0.51	Zn	(0.00009)
Mo	1.18	Zr	(0.001)
N	0.05		

Ag	(<0.001)	Na	
Al	0.26	Nb	0.084
As		Nd	
Au		Ni	(59.6)
B	0.005	O	0.0007
Be		P	0.006
Bi	(<0.001)	Pb	(<0.001)
C	0.101	Pd	
Ca	(<0.005)	Pr	
Cd		Pt	
Ce		Re	
Co	0.24	Rh	
Cr	21.9	Ru	
Cu	0.031	S	0.0005
Fe	1.5	Sb	(<0.001)
Ga		Se	
Gd		Si	0.381
Ge		Sn	(<0.001)
H		Sr	
Hf		Ta	(0.009)
Hg		Te	
In		Ti	0.01
Ir		Tl	
La		V	0.007
Li		W	14.5
Mg	0.006	Y	(<0.001)
Mn	0.499	Zn	
Mo	1.35	Zr	(0.002)
N	0.045		

Cobalt and Nickel Alloys

Name IARM-51D
Description Nickel-Copper Alloy
Grade Alloy 400
UNS N04400

Name IARM-52D
Description Nickel-Copper Alloy
Grade Alloy K500
UNS N05500

Name MBH-212X 04400 A
Description Nickel-Copper Alloy
Grade Monel Type Alloy
UNS

Name MBH-212X 05500 A
Description Nickel-Copper Alloy
Grade Monel Type Alloy
UNS

Name MBH-212X 4001 Q
Description Nickel-Copper Alloy
Grade Monel Type Alloy
UNS

Ag	(<0.0004)	Na	(<0.0005)
Al	0.036	Nb	0.006
As	(<0.003)	Nd	
Au		Ni	64.1
B	(<0.0003)	O	(<0.0007)
Be	(<0.0001)	P	0.01
Bi	(<0.003)	Pb	(<0.001)
C	0.139	Pd	(<0.0001)
Ca	(<0.001)	Pr	
Cd	(<0.0001)	Pt	
Ce	(<0.0001)	Re	(<0.0001)
Co	0.011	Rh	
Cr	0.064	Ru	(<0.0001)
Cu	32.6	S	0.0015
Fe	1.68	Sb	(<0.0001)
Ga	(0.00019)	Se	(<0.0004)
Gd		Si	0.16
Ge	(<0.002)	Sn	(0.00016)
H		Sr	
Hf	(<0.0001)	Ta	(<0.001)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.033
Ir		Tl	
La	(<0.0001)	V	(0.001)
Li		W	(0.0017)
Mg	0.016	Y	(<0.0005)
Mn	1.03	Zn	(<0.0005)
Mo	0.019	Zr	(0.0008)
N	(0.00019)		

Ag	(0.0006)	Na	(<0.0005)
Al	2.95	Nb	0.002
As	(<0.003)	Nd	
Au		Ni	64.5
B	0.002	O	(0.0004)
Be	(<0.0001)	P	0.002
Bi	(<0.003)	Pb	0.002
C	0.125	Pd	(<0.002)
Ca	(<0.003)	Pr	
Cd	(<0.0001)	Pt	
Ce	(<0.0001)	Re	(<0.0001)
Co	0.005	Rh	
Cr	0.004	Ru	(<0.0001)
Cu	29.6	S	0.0012
Fe	1.38	Sb	(<0.004)
Ga	(0.00032)	Se	(<0.0007)
Gd		Si	0.17
Ge	(0.0002)	Sn	0.0013
H		Sr	
Hf	(0.00008)	Ta	(<0.01)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.6
Ir		Tl	
La	(<0.0001)	V	0.001
Li		W	(<0.008)
Mg	0.0065	Y	(<0.0005)
Mn	0.59	Zn	(0.0011)
Mo	(0.002)	Zr	0.026
N	(<0.002)		

Ag		Na	
Al	0.03	Nb	
As		Nd	
Au		Ni	63.69
B	0.0019	O	
Be		P	0.0033
Bi		Pb	
C	0.157	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0432	Rh	
Cr	0.166	Ru	
Cu	32.47	S	(0.002)
Fe	2.065	Sb	
Ga		Se	
Gd		Si	0.253
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0193
Ir		Tl	
La		V	
Li		W	
Mg	0.053	Y	
Mn	1.027	Zn	
Mo	0.0307	Zr	
N	0.0005		

Ag		Na	
Al	3	Nb	
As		Nd	
Au		Ni	64.3
B	0.0015	O	
Be		P	0.0031
Bi		Pb	
C	0.135	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.009)	Rh	
Cr	0.073	Ru	
Cu	29.91	S	0.001
Fe	1.162	Sb	
Ga		Se	
Gd		Si	0.167
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.632
Ir		Tl	
La		V	
Li		W	
Mg	0.0098	Y	
Mn	0.634	Zn	
Mo		Zr	0.0343
N	0.001		

Ag		Na	
Al	(0.038)	Nb	0.1
As		Nd	
Au		Ni	65.49
B		O	
Be		P	0.0198
Bi		Pb	0.0703
C	0.013	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.111	Rh	
Cr	0.0795	Ru	
Cu	28.92	S	0.0206
Fe	0.503	Sb	
Ga		Se	
Gd		Si	1.48
Ge		Sn	(0.056)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.094)
Ir		Tl	
La		V	
Li		W	
Mg	0.0016	Y	
Mn	2.95	Zn	
Mo		Zr	
N			

Cobalt and Nickel Alloys

Name MBH-212X 4005 G
Description Nickel-Copper Alloy
Grade Monel Type Alloy
UNS

Name MBH-13X NSA11 A
Description Nickel-Iron-Chromium Alloy
Grade AL 6XN
UNS N08367

Name IARM-157D
Description Nickel-Iron-Chromium Alloy
Grade AL 6XN
UNS N08367

Name IARM-357A
Description Nickel-Iron-Chromium Alloy
Grade Alloy 028
UNS N08028

Name IARM-25A ↓
Description Nickel-Iron-Chromium Alloy
Grade Alloy 20
UNS N08020

Ag		Na	
Al	1.399	Nb	0.341
As		Nd	
Au		Ni	(70.1)
B		O	
Be		P	0.0106
Bi		Pb	0.0091
C	0.0494	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.156	Rh	
Cr	0.2	Ru	
Cu	21.53	S	0.0038
Fe	1.053	Sb	
Ga		Se	
Gd		Si	2.52
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	1.005
Ir		Tl	
La		V	
Li		W	
Mg	(0.003)	Y	
Mn	1.437	Zn	
Mo	0.102	Zr	
N			

Ag		Na	
Al	(0.02)	Nb	0.15
As		Nd	
Au		Ni	23.89
B		O	
Be		P	0.0186
Bi		Pb	
C	0.0159	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0981	Rh	
Cr	20.19	Ru	
Cu	0.187	S	<0.001
Fe		Sb	
Ga		Se	
Gd		Si	0.275
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.0513
Li		W	0.038
Mg		Y	
Mn	0.64	Zn	
Mo	6.16	Zr	
N	0.203		

Ag	(<0.0005)	Na	(<0.0005)
Al	0.02	Nb	0.149
As	(<0.004)	Nd	
Au		Ni	23.9
B	0.0007	O	(0.004)
Be	(<0.0001)	P	0.016
Bi	(<0.03)	Pb	(<0.002)
C	0.0154	Pd	(<0.0001)
Ca	(<0.005)	Pr	
Cd	(<0.02)	Pt	
Ce	(<0.0001)	Re	(0.0005)
Co	0.102	Rh	
Cr	20.31	Ru	(<0.0001)
Cu	0.196	S	0.0005
Fe	48	Sb	(0.0007)
Ga	(0.003)	Se	(<0.0002)
Gd		Si	0.28
Ge	(0.001)	Sn	0.0036
H		Sr	
Hf	(<0.07)	Ta	(0.003)
Hg		Te	(<0.002)
In	(<0.0001)	Ti	0.009
Ir		Tl	
La	(<0.07)	V	0.05
Li		W	0.036
Mg	(<0.0003)	Y	(<0.001)
Mn	0.626	Zn	(0.0001)
Mo	6.08	Zr	(0.001)
N	0.203		

Ag	(<0.0005)	Na	
Al	0.09	Nb	0.089
As	(<0.01)	Nd	
Au		Ni	31.9
B	0.0014	O	0.005
Be		P	0.013
Bi	(<0.0001)	Pb	(<0.002)
C	0.0199	Pd	
Ca	(<0.005)	Pr	
Cd		Pt	
Ce		Re	(<0.0005)
Co	0.17	Rh	
Cr	27	Ru	
Cu	0.81	S	0.0021
Fe	34.3	Sb	(<0.001)
Ga		Se	
Gd		Si	0.458
Ge		Sn	(0.002)
H		Sr	
Hf	(<0.009)	Ta	(0.008)
Hg		Te	
In		Ti	0.079
Ir		Tl	
La	(<0.001)	V	0.091
Li		W	0.108
Mg	0.005	Y	(<0.001)
Mn	1.63	Zn	(<0.001)
Mo	3.48	Zr	(0.005)
N	0.011		

Ag		Na	
Al	0.01	Nb	0.51
As		Nd	
Au		Ni	33.57
B		O	(0.012)
Be		P	0.02
Bi		Pb	(0.003)
C	0.024	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.27	Rh	
Cr	19.63	Ru	
Cu	3.23	S	0.003
Fe		Sb	
Ga		Se	
Gd		Si	0.32
Ge		Sn	0.028
H		Sr	
Hf		Ta	(0.21)
Hg		Te	
In		Ti	0.004
Ir		Tl	
La		V	0.1
Li		W	0.05
Mg		Y	
Mn	0.48	Zn	
Mo	2.1	Zr	
N	(0.015)		

Cobalt and Nickel Alloys

Name	IARM-25D
Description	Nickel-Iron-Chromium Alloy
Grade	Alloy 20
UNS	N08020

Name	IARM-Ni256Mo-18
Description	Nickel-Iron-Chromium Alloy
Grade	Alloy 25-6Mo
UNS	N08926

Name	IARM-7A ↓
Description	Nickel-Iron-Chromium Alloy
Grade	Alloy 330
UNS	N08330

Name	IARM-7B ↓
Description	Nickel-Iron-Chromium Alloy
Grade	Alloy 330
UNS	N08330

Name	IARM-59A ↓
Description	Nickel-Iron-Chromium Alloy
Grade	Alloy 825
UNS	N08825

Ag	(0.0004)	Na	(<0.0005)
Al	0.015	Nb	0.66
As	(0.004)	Nd	
Au		Ni	32.6
B	0.0036	O	0.005
Be	(<0.0001)	P	0.019
Bi	(<0.0001)	Pb	(0.004)
C	0.028	Pd	(<0.0001)
Ca	(<0.009)	Pr	
Cd	(<0.005)	Pt	
Ce	(<0.0001)	Re	(<0.007)
Co	0.14	Rh	
Cr	20	Ru	(<0.0001)
Cu	3.46	S	0.0013
Fe	38.7	Sb	(0.0008)
Ga	(0.002)	Se	(<0.0003)
Gd		Si	0.7
Ge	(<0.002)	Sn	0.008
H		Sr	
Hf	(<0.0005)	Ta	(0.002)
Hg		Te	(<0.0007)
In	(<0.0001)	Ti	0.009
Ir		Tl	
La	(<0.001)	V	0.089
Li		W	0.13
Mg	0.0016	Y	(<0.0005)
Mn	1.14	Zn	(0.0013)
Mo	2.1	Zr	(0.003)
N	0.034		

Ag	(<0.002)	Na	
Al	0.17	Nb	0.01
As		Nd	
Au		Ni	25.5
B	0.0009	O	(0.003)
Be		P	0.004
Bi	(<0.0001)	Pb	(<0.03)
C	0.0182	Pd	
Ca	0.0014	Pr	
Cd		Pt	
Ce		Re	(<0.01)
Co	0.02	Rh	
Cr	20.3	Ru	
Cu	1.98	S	0.0011
Fe	44	Sb	(<0.0001)
Ga		Se	
Gd		Si	0.41
Ge		Sn	(<0.002)
H		Sr	
Hf	(<0.12)	Ta	(<0.03)
Hg		Te	
In		Ti	0.006
Ir		Tl	
La		V	0.009
Li		W	0.01
Mg	(0.0092)	Y	
Mn	0.83	Zn	
Mo	6.63	Zr	(0.003)
N	0.022		

Ag		Na	
Al	0.022	Nb	0.013
As		Nd	
Au		Ni	(35.53)
B		O	(0.014)
Be		P	0.018
Bi		Pb	(0.005)
C	0.063	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.06	Rh	
Cr	19	Ru	
Cu	0.19	S	0.004
Fe		Sb	
Ga		Se	
Gd		Si	1.24
Ge		Sn	0.003
H		Sr	
Hf		Ta	(0.19)
Hg		Te	
In		Ti	(0.004)
Ir		Tl	
La		V	0.05
Li		W	(0.045)
Mg		Y	
Mn	1.51	Zn	
Mo	0.31	Zr	
N	0.038		

Ag		Na	
Al	0.023	Nb	0.023
As		Nd	
Au		Ni	35.84
B	(0.002)	O	0.0026
Be		P	0.018
Bi		Pb	
C	0.062	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.069	Rh	
Cr	19.32	Ru	
Cu	0.21	S	(0.001)
Fe	(43)	Sb	
Ga		Se	
Gd		Si	1.38
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.005)
Ir		Tl	
La		V	0.048
Li		W	(0.031)
Mg		Y	
Mn	1.47	Zn	
Mo	0.19	Zr	
N	0.013		

Ag		Na	
Al	0.05	Nb	0.02
As		Nd	
Au		Ni	(40.91)
B	(0.002)	O	
Be		P	0.017
Bi		Pb	
C	0.02	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.25	Rh	
Cr	22.12	Ru	
Cu	1.71	S	0.001
Fe	30.82	Sb	
Ga		Se	
Gd		Si	0.1
Ge		Sn	(0.001)
H		Sr	
Hf		Ta	(<0.01)
Hg		Te	
In		Ti	0.83
Ir		Tl	
La		V	0.03
Li		W	0.13
Mg	(<0.001)	Y	
Mn	0.33	Zn	
Mo	2.68	Zr	(<0.01)
N			

Cobalt and Nickel Alloys

Name IARM-Ni825-18
Description Nickel-Iron-Chromium Alloy
Grade Alloy 825
UNS N08825

Name IARM-Ni925-18
Description Nickel-Iron-Chromium Alloy
Grade Alloy 925
UNS N09925

Name IARM-328A
Description Nickel-Iron-Chromium Alloy
Grade Alloy 945
UNS N09945

Name IARM-328B
Description Nickel-Iron-Chromium Alloy
Grade Alloy 945X
UNS N09945

Name IARM-282A
Description Nickel-Iron-Chromium Alloy
Grade Alloy HR-120
UNS N08120

Ag	(<0.0001)	Na	(<0.0001)
Al	0.11	Nb	0.31
As	(0.002)	Nd	
Au		Ni	40.8
B	0.0023	O	0.002
Be	(<0.0001)	P	0.013
Bi	(<0.001)	Pb	(<0.001)
C	0.006	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce	(<0.0001)	Re	(0.0039)
Co	0.55	Rh	
Cr	22.4	Ru	(<0.0001)
Cu	1.81	S	(0.003)
Fe	29.5	Sb	(0.004)
Ga	(0.003)	Se	(<0.005)
Gd		Si	0.17
Ge	(<0.001)	Sn	0.0023
H	(<0.0007)	Sr	
Hf	(<0.005)	Ta	0.0011
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.96
Ir		Tl	
La	(<0.0001)	V	0.047
Li		W	0.23
Mg	(0.0002)	Y	(<0.001)
Mn	0.49	Zn	(<0.001)
Mo	2.8	Zr	0.002
N	0.0093		

Ag		Na	
Al	0.23	Nb	0.4
As		Nd	
Au		Ni	44.2
B	0.0034	O	0.0011
Be		P	0.012
Bi		Pb	
C	0.0114	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.43	Rh	
Cr	20.8	Ru	
Cu	1.69	S	0.0024
Fe	26.4	Sb	
Ga		Se	
Gd		Si	0.075
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	2.19
Ir		Tl	
La		V	0.031
Li		W	0.27
Mg		Y	
Mn	0.518	Zn	
Mo	2.82	Zr	
N	0.0033		

Ag	(<0.00001)	Na	
Al	0.189	Nb	3.14
As	0.0009	Nd	
Au		Ni	47.03
B	0.0011	O	0.0006
Be		P	0.004
Bi	(<0.001)	Pb	0.00002
C	0.006	Pd	
Ca	(<0.004)	Pr	
Cd		Pt	
Ce		Re	
Co	0.003	Rh	
Cr	20.57	Ru	
Cu	1.94	S	0.0006
Fe	22.41	Sb	0.00023
Ga		Se	
Gd		Si	0.021
Ge		Sn	0.0002
H		Sr	
Hf		Ta	0.004
Hg		Te	
In		Ti	1.53
Ir		Tl	
La	(<0.0005)	V	0.008
Li		W	0.015
Mg	0.0008	Y	
Mn	0.017	Zn	
Mo	3.16	Zr	0.004
N	0.0056		

Ag	(<0.0001)	Na	
Al	0.116	Nb	3.99
As	(<0.001)	Nd	
Au		Ni	53.7
B	0.001	O	(0.002)
Be		P	0.005
Bi		Pb	(<0.001)
C	0.01	Pd	
Ca	(0.001)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	(<0.004)
Co	0.063	Rh	
Cr	20.5	Ru	
Cu	2	S	0.0006
Fe	15	Sb	(<0.0001)
Ga		Se	(<0.002)
Gd		Si	0.05
Ge		Sn	(0.001)
H		Sr	
Hf	(<0.06)	Ta	(0.01)
Hg		Te	
In		Ti	1.53
Ir		Tl	
La		V	0.014
Li		W	0.04
Mg	(0.0013)	Y	(<0.01)
Mn	0.077	Zn	(<0.001)
Mo	3.12	Zr	(<0.001)
N	0.006		

Ag	(0.0001)	Na	
Al	0.085	Nb	0.57
As	(0.003)	Nd	
Au		Ni	37.1
B	0.005	O	0.0023
Be		P	0.016
Bi	(<0.0001)	Pb	(0.001)
C	0.054	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.12	Rh	
Cr	24.6	Ru	
Cu	0.0615	S	0.0003
Fe	0.0615	Sb	(0.0004)
Ga		Se	
Gd		Si	0.63
Ge		Sn	0.003
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	0.019
Ir		Tl	
La		V	0.052
Li		W	0.043
Mg	0.004	Y	
Mn	0.81	Zn	
Mo	0.21	Zr	(0.002)
N	0.207		

Cobalt and Nickel Alloys

Name MBH-23X 08811 A
Description Nickel-Iron-Chromium Alloy
Grade Incoloy Type Alloy
UNS

Ag		Na	
Al	0.453	Nb	0.009
As		Nd	
Au		Ni	31.31
B	0.0038	O	
Be		P	0.0212
Bi		Pb	
C	0.068	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.082	Rh	
Cr	19.72	Ru	
Cu	0.247	S	<0.001
Fe	45.81	Sb	
Ga		Se	
Gd		Si	0.263
Ge		Sn	0.0054
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.543
Ir		Tl	
La		V	0.06
Li		W	0.0279
Mg	0.0044	Y	
Mn	1.009	Zn	
Mo	0.242	Zr	
N	0.0096		

Name MBH-23X DS4 E ↓
Description Nickel-Iron-Chromium Alloy
Grade Incoloy Type Alloy
UNS

Ag		Na	
Al	0.037	Nb	
As		Nd	
Au		Ni	37.15
B		O	
Be		P	
Bi		Pb	
C	0.06	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.48	Rh	
Cr	16.83	Ru	
Cu	0.3	S	
Fe		Sb	
Ga		Se	
Gd		Si	2.01
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.2
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.02	Zn	
Mo	0.29	Zr	
N			

Name MBH-23X DS5 E ↓
Description Nickel-Iron-Chromium Alloy
Grade Incoloy Type Alloy
UNS

Ag		Na	
Al	0.083	Nb	
As		Nd	
Au		Ni	36.57
B		O	
Be		P	
Bi		Pb	
C	0.08	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.5	Rh	
Cr	18.64	Ru	
Cu	0.3	S	
Fe		Sb	
Ga		Se	
Gd		Si	1.98
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.17
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.04	Zn	
Mo	0.3	Zr	
N			

Name MBH-219X 08825 A
Description Nickel-Iron-Chromium Alloy
Grade
UNS

Ag		Na	
Al	0.149	Nb	(0.007)
As		Nd	
Au		Ni	39.12
B	0.0028	O	
Be		P	0.0189
Bi		Pb	
C	0.015	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.0646	Rh	
Cr	21.94	Ru	
Cu	1.87	S	(0.001)
Fe	31.82	Sb	
Ga		Se	
Gd		Si	0.232
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	1.192
Ir		Tl	
La		V	0.038
Li		W	
Mg	(0.003)	Y	
Mn	0.499	Zn	
Mo	3.01	Zr	0.0021
N			

Name IARM-203A ↓
Description Nickel-Iron-Cobalt Alloy
Grade Alloy 909
UNS N19909

Ag		Na	
Al	0.066	Nb	5
As		Nd	
Au		Ni	38.4
B	(0.002)	O	
Be		P	0.006
Bi		Pb	
C	0.005	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	12.9	Rh	
Cr	0.72	Ru	
Cu	0.05	S	0.0009
Fe	40.6	Sb	
Ga		Se	
Gd		Si	0.41
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	1.58
Ir		Tl	
La		V	(<0.01)
Li		W	(0.02)
Mg	(<0.002)	Y	
Mn	0.023	Zn	
Mo	0.09	Zr	(<0.01)
N	0.001		

Cobalt and Nickel Alloys

Name IARM-Ni909-18
Description Nickel-Iron-Cobalt Alloy
Grade Alloy 909
UNS N19909

Name IARM-Ni244H-18
Description Nickel-Iron-Manganese Weld Filler
Grade Alloy 244H
UNS N02216*

Name MBH-219X 20004 A
Description Nickel-Manganese Alloy
Grade
UNS

Name IARM-63D
Description Nickel-Molybdenum Alloy
Grade Alloy B-2
UNS N10665

Name IARM-NiB3-18
Description Nickel-Molybdenum Alloy
Grade Alloy B-3
UNS N10675

Ag	(<0.0005)	Na	(<0.0001)
Al	0.009	Nb	4.6
As	(<0.005)	Nd	
Au		Ni	37.7
B	0.0013	O	0.004
Be	(<0.0001)	P	0.002
Bi	(<0.001)	Pb	(<0.001)
C	0.006	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.001)	Pt	
Ce	(<0.0001)	Re	(<0.0001)
Co	13.1	Rh	
Cr	0.01	Ru	(<0.0001)
Cu	0.007	S	0.0018
Fe	42.4	Sb	(<0.001)
Ga	(<0.0003)	Se	(<0.005)
Gd		Si	0.42
Ge	(<0.0002)	Sn	(<0.012)
H	(<0.0002)	Sr	
Hf	(<0.025)	Ta	0.006
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	1.62
Ir		Tl	
La	(<0.0001)	V	(<0.0001)
Li		W	0.009
Mg	0.00012	Y	(<0.001)
Mn	0.03	Zn	(<0.001)
Mo	(<0.04)	Zr	(<0.003)
N	0.0026		

Ag	(<0.0005)	Na	(<0.0001)
Al	0.23	Nb	0.7
As	0.0009	Nd	
Au		Ni	41.1
B	0.002	O	0.0009
Be	(<0.0001)	P	0.003
Bi	(<0.005)	Pb	(<0.025)
C	0.052	Pd	(<0.001)
Ca	(0.0003)	Pr	
Cd	(<0.005)	Pt	
Ce	(<0.0001)	Re	(<0.005)
Co	0.005	Rh	
Cr	6.9	Ru	(<0.0001)
Cu	0.013	S	0.0038
Fe	39.9	Sb	0.00012
Ga	(0.001)	Se	(<0.001)
Gd		Si	0.16
Ge	(0.001)	Sn	0.0003
H	(<0.0003)	Sr	
Hf	(<0.005)	Ta	(0.001)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	0.2
Ir		Tl	
La	(<0.0005)	V	0.004
Li		W	(0.002)
Mg	0.0014	Y	(<0.001)
Mn	10.9	Zn	(<0.0003)
Mo	0.003	Zr	0.0008
N	0.0087		

Ag		Na	
Al		Nb	1.53
As		Nd	
Au		Ni	59.1
B		O	
Be		P	0.0147
Bi		Pb	
C	0.224	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.104)	Rh	
Cr	13.63	Ru	
Cu	0.319	S	0.0028
Fe	9.48	Sb	
Ga		Se	
Gd		Si	0.916
Ge		Sn	
H		Sr	
Hf		Ta	0.077
Hg		Te	
In		Ti	0.52
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	14.07	Zn	
Mo	0.104	Zr	
N			

Ag	(<0.001)	Na	(<0.0005)
Al	0.13	Nb	0.04
As	(<0.001)	Nd	
Au		Ni	70.4
B	0.0017	O	(<0.006)
Be	(<0.0001)	P	0.004
Bi	(<0.0001)	Pb	(<0.001)
C	0.0079	Pd	(<0.0001)
Ca	(<0.001)	Pr	
Cd	(<0.07)	Pt	
Ce	(<0.0001)	Re	(0.0001)
Co	0.013	Rh	
Cr	0.153	Ru	(<0.0001)
Cu	0.003	S	0.0006
Fe	1.56	Sb	(<0.0005)
Ga	(0.0001)	Se	(<0.0002)
Gd		Si	0.03
Ge	(<0.0001)	Sn	(0.002)
H		Sr	
Hf	(<0.01)	Ta	(<0.011)
Hg		Te	(<0.0003)
In	(<0.0001)	Ti	0.14
Ir		Tl	
La	(<0.01)	V	0.007
Li		W	0.02
Mg	0.0013	Y	(<0.001)
Mn	0.76	Zn	(<0.0003)
Mo	26.6	Zr	0.002
N	(0.0007)		

Ag	(<0.0001)	Na	(<0.0001)
Al	0.41	Nb	0.15
As	(0.002)	Nd	
Au		Ni	67.2
B	(0.002)	O	(0.0007)
Be	(<0.0001)	P	0.005
Bi	(<0.001)	Pb	(<0.004)
C	0.003	Pd	
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce	(<0.0001)	Re	(0.0005)
Co	0.142	Rh	
Cr	1.55	Ru	(<0.0001)
Cu	0.014	S	(0.0004)
Fe	1.57	Sb	(0.00023)
Ga	(<0.0009)	Se	(<0.0001)
Gd		Si	0.021
Ge	(<0.0003)	Sn	(0.0015)
H	(<0.0001)	Sr	
Hf	(<0.005)	Ta	(0.0007)
Hg		Te	(<0.001)
In		Ti	0.007
Ir		Tl	
La	(<0.0001)	V	0.007
Li		W	0.07
Mg	0.01	Y	(<0.001)
Mn	0.7	Zn	(<0.001)
Mo	28.2	Zr	(<0.0005)
N	0.0027		

Cobalt and Nickel Alloys

Name IARM-NiC276-18
Description Nickel-Molybdenum-Chromium Alloy
Grade Alloy C276
UNS N10276

Name MBH-215X 10276 A
Description Nickel-Molybdenum-Chromium Alloy
Grade Hastelloy Type Alloy
UNS

Name MBH-215X HB1 P
Description Nickel-Molybdenum-Chromium Alloy
Grade Hastelloy Type Alloy
UNS

Name MBH-215X HC2 K
Description Nickel-Molybdenum-Chromium Alloy
Grade Hastelloy Type Alloy
UNS

Name MBH-215X HC4 M
Description Nickel-Molybdenum-Chromium Alloy
Grade Hastelloy Type Alloy
UNS

Ag	<0.0005	Na	<0.0001
Al	0.114	Nb	0.061
As	<0.005	Nd	
Au		Ni	58.5
B	0.002	O	(0.001)
Be	<0.0001	P	0.008
Bi	<0.001	Pb	<0.001
C	0.0032	Pd	<0.001
Ca	<0.005	Pr	
Cd	<0.005	Pt	
Ce	<0.0001	Re	<0.001
Co	0.17	Rh	
Cr	15.9	Ru	<0.0001
Cu	0.14	S	0.0007
Fe	6.09	Sb	(0.001)
Ga	<0.002	Se	<0.005
Gd		Si	0.017
Ge	<0.0001	Sn	(0.0005)
H	<0.0003	Sr	
Hf	<0.001	Ta	<0.06
Hg		Te	
In	<0.0001	Ti	0.007
Ir		Tl	
La	<0.001	V	0.018
Li		W	3.23
Mg	0.01	Y	<0.001
Mn	0.42	Zn	<0.001
Mo	15.4	Zr	<0.001
N	0.017		

Ag		Na	
Al	0.203	Nb	0.031
As		Nd	
Au		Ni	57.81
B		O	
Be		P	0.0027
Bi		Pb	
C	0.008	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.182	Rh	
Cr	15.56	Ru	
Cu	0.0423	S	(0.001)
Fe	5.79	Sb	
Ga		Se	
Gd		Si	0.029
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0186
Ir		Tl	
La		V	0.196
Li		W	3.59
Mg	0.009	Y	
Mn	0.498	Zn	
Mo	15.96	Zr	0.009
N	0.0099		

Ag		Na	
Al		Nb	0.203
As		Nd	
Au		Ni	58
B		O	
Be		P	0.0056
Bi		Pb	
C	0.0422	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.252	Rh	
Cr	1.09	Ru	
Cu	0.0718	S	0.0506
Fe	5.78	Sb	
Ga		Se	
Gd		Si	0.15
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	0.504
Li		W	
Mg		Y	
Mn	0.697	Zn	
Mo	33.04	Zr	
N	0.0156		

Ag		Na	
Al	0.005	Nb	
As		Nd	
Au		Ni	(53.8)
B		O	
Be		P	
Bi		Pb	
C	0.0456	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	1.7	Rh	
Cr	16.46	Ru	
Cu		S	0.0163
Fe	2.97	Sb	
Ga		Se	
Gd		Si	1.22
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.181
Ir		Tl	
La		V	0.282
Li		W	4.02
Mg		Y	
Mn	0.909	Zn	
Mo	18.44	Zr	
N	0.0091		

Ag		Na	
Al	(0.052)	Nb	
As		Nd	
Au		Ni	(50.3)
B		O	
Be		P	0.039
Bi		Pb	
C	0.141	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.709	Rh	
Cr	18.44	Ru	
Cu	0.331	S	0.0222
Fe	6.01	Sb	
Ga		Se	
Gd		Si	1.15
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.094)
Ir		Tl	
La		V	0.491
Li		W	4.99
Mg		Y	
Mn	0.441	Zn	
Mo	16.93	Zr	
N	0.071		

Cobalt and Nickel Alloys

Name MBH-215X HCS V
Description Nickel-Molybdenum-Chromium Alloy
Grade Hastelloy Type Alloy
UNS

Name IARM-55A ↓
Description Nickel-Molybdenum-Chromium Alloy
Grade Haynes 242
UNS N10242

Name IARM-55B ↓
Description Nickel-Molybdenum-Chromium Alloy
Grade Haynes 242
UNS N10242

Name IARM-Ni282-18
Description Nickel-Molybdenum-Chromium Alloy
Grade Haynes 282
UNS N07208

Ag		Na	
Al	0.721	Nb	
As		Nd	
Au		Ni	(45.9)
B		O	
Be		P	0.054
Bi		Pb	
C	0.201	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.046	Rh	
Cr	20.05	Ru	
Cu	0.485	S	0.038
Fe	8.15	Sb	
Ga		Se	
Gd		Si	1.379
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.198
Ir		Tl	
La		V	0.607
Li		W	6.19
Mg		Y	
Mn	0.1	Zn	
Mo	16.03	Zr	
N	0.0081		

Ag		Na	
Al	0.24	Nb	0.02
As		Nd	
Au		Ni	(64.71)
B	0.005	O	
Be		P	0.003
Bi		Pb	
C	0.03	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.04	Rh	
Cr	7.9	Ru	
Cu	0.03	S	0.001
Fe	1.09	Sb	
Ga		Se	
Gd		Si	0.11
Ge		Sn	(<0.01)
H		Sr	
Hf		Ta	(0.01)
Hg		Te	
In		Ti	0.01
Ir		Tl	
La		V	(<0.01)
Li		W	0.09
Mg		Y	
Mn	0.33	Zn	
Mo	25.4	Zr	(<0.02)
N			

Ag		Na	
Al	0.09	Nb	0.08
As		Nd	
Au		Ni	65.4
B	0.002	O	0.0009
Be		P	0.005
Bi		Pb	(<0.002)
C	0.004	Pd	
Ca	(<0.005)	Pr	
Cd		Pt	
Ce		Re	
Co	0.036	Rh	
Cr	8.25	Ru	
Cu	0.013	S	0.001
Fe	1.12	Sb	(<0.0001)
Ga		Se	
Gd		Si	0.021
Ge		Sn	(<0.001)
H		Sr	
Hf		Ta	(0.08)
Hg		Te	
In		Ti	0.002
Ir		Tl	
La		V	0.005
Li		W	0.12
Mg	0.011	Y	
Mn	0.323	Zn	
Mo	24.62	Zr	(0.005)
N	0.016		

Ag	(<0.0001)	Na	(<0.0005)
Al	1.57	Nb	0.058
As	(<0.005)	Nd	
Au		Ni	56.8
B	0.0014	O	(<0.002)
Be	(<0.0001)	P	0.003
Bi	(<0.0002)	Pb	(<0.0001)
C	0.06	Pd	(<0.0001)
Ca	(<0.002)	Pr	
Cd	(<0.0001)	Pt	
Ce	(<0.0001)	Re	(<0.0001)
Co	10.38	Rh	
Cr	19.4	Ru	(<0.0001)
Cu	0.012	S	0.0006
Fe	0.9	Sb	(<0.0002)
Ga	(0.0019)	Se	(<0.001)
Gd		Si	0.054
Ge	(<0.0001)	Sn	(0.0003)
H		Sr	
Hf	(<0.0001)	Ta	(<0.01)
Hg		Te	(<0.0001)
In	(<0.0001)	Ti	2.2
Ir		Tl	
La	(<0.0001)	V	0.013
Li		W	0.043
Mg	0.0054	Y	(<0.002)
Mn	0.042	Zn	(<0.007)
Mo	8.4	Zr	0.0014
N	(0.0073)		

Section 11

Lead Alloys, Tin Alloys and Solders

Name MBH-83X CU06 A
Description Lead with Impurities
Grade
UNS

Ag	0.0019	Na	
Al		Nb	
As	(0.0001)	Nd	
Au		Ni	0.0003
B		O	
Be		P	
Bi	0.0134	Pb	
C		Pd	
Ca		Pr	
Cd	(0.0001)	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0554	S	0.0011
Fe		Sb	(0.0008)
Ga		Se	(0.0005)
Gd		Si	
Ge		Sn	(0.0004)
H		Sr	
Hf		Ta	
Hg		Te	(0.0002)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0003)
Mo		Zr	
N			

Name MBH-83X PR1 K
Description Lead with Impurities
Grade
UNS

Ag	0.1029	Na	
Al		Nb	
As	0.0338	Nd	
Au	0.0019	Ni	(0.0004)
B		O	
Be		P	
Bi	0.0508	Pb	
C		Pd	
Ca		Pr	
Cd	0.074	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0465	S	
Fe		Sb	0.01
Ga		Se	0.0008
Gd		Si	
Ge		Sn	0.016
H		Sr	
Hf		Ta	
Hg		Te	0.0058
In	0.008	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.002)
Mo		Zr	
N			

Name MBH-83X PR11 A
Description Lead with Impurities
Grade
UNS

Ag	0.003	Na	
Al		Nb	
As	0.0095	Nd	
Au		Ni	0.0011
B		O	
Be		P	
Bi	0.0117	Pb	
C		Pd	
Ca		Pr	
Cd	0.0008	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0551	S	0.009
Fe	(0.0003)	Sb	0.497
Ga		Se	(0.0001)
Gd		Si	
Ge		Sn	0.119
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	0.0042
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-83X PR12 A
Description Lead with Impurities
Grade
UNS

Ag	0.003	Na	
Al		Nb	
As	(0.0003)	Nd	
Au		Ni	0.0009
B		O	
Be		P	
Bi	0.0119	Pb	
C		Pd	
Ca		Pr	
Cd	0.0011	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0353	S	(0.0002)
Fe	(0.0003)	Sb	0.0011
Ga		Se	(0.0002)
Gd		Si	
Ge		Sn	0.0005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	0.0051
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-83X PR2 G
Description Lead with Impurities
Grade
UNS

Ag	0.055	Na	0.0013
Al		Nb	
As	0.0233	Nd	
Au	0.0005	Ni	0.0006
B		O	
Be		P	
Bi	0.0404	Pb	
C		Pd	
Ca		Pr	
Cd	0.002	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0309	S	
Fe		Sb	0.0499
Ga		Se	0.0005
Gd		Si	
Ge		Sn	0.0948
H		Sr	
Hf		Ta	
Hg	0.003	Te	0.01
In	0.001	Ti	
Ir		Tl	(0.0017)
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0005
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-83X PR3 G

Description Lead with Impurities

Grade

UNS

Ag	0.0029	Na	(0.004)
Al		Nb	
As	0.0011	Nd	
Au	0.0036	Ni	0.0116
B		O	
Be		P	
Bi	0.144	Pb	
C		Pd	
Ca		Pr	
Cd	0.0462	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0694	S	
Fe		Sb	0.0888
Ga		Se	0.0166
Gd		Si	
Ge		Sn	0.0417
H		Sr	
Hf		Ta	
Hg	0.0008	Te	0.0039
In	0.0093	Ti	
Ir		Tl	0.0033
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0007)
Mo		Zr	
N			

Name MBH-83X PR5 G2

Description Lead with Impurities

Grade

UNS

Ag	0.0011	Na	
Al		Nb	
As	0.0003	Nd	
Au		Ni	(0.0002)
B		O	
Be		P	
Bi	0.0086	Pb	
C		Pd	
Ca		Pr	
Cd	0.0003	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0006	S	
Fe		Sb	0.0006
Ga		Se	0.0004
Gd		Si	
Ge		Sn	(0.0007)
H		Sr	
Hf		Ta	
Hg	(0.0001)	Te	0.0003
In	(0.0001)	Ti	
Ir		Tl	(0.0001)
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0002)
Mo		Zr	
N			

Name MBH-83X PR7 C

Description Lead with Impurities

Grade

UNS

Ag	0.29	Na	
Al		Nb	
As	0.052	Nd	
Au		Ni	0.0025
B		O	
Be		P	
Bi	0.49	Pb	
C		Pd	
Ca		Pr	
Cd	0.46	Pt	0.004
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.15	S	
Fe		Sb	0.78
Ga		Se	0.006
Gd		Si	
Ge		Sn	0.22
H		Sr	
Hf		Ta	
Hg		Te	0.009
In	0.58	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-83X PR8 D

Description Lead with Impurities

Grade

UNS

Ag	0.497	Na	
Al		Nb	
As	0.134	Nd	
Au	0.0106	Ni	0.0008
B		O	
Be		P	
Bi	1.18	Pb	
C		Pd	
Ca		Pr	
Cd	0.199	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0448	S	
Fe		Sb	0.257
Ga		Se	(0.0003)
Gd		Si	
Ge		Sn	0.604
H		Sr	
Hf		Ta	
Hg	0.086	Te	0.0014
In	0.293	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0004
Mo		Zr	
N			

Name MBH-84X BA1 K

Description Lead Battery Alloy (Pb/Sn/Ca)

Grade

UNS

Ag	0.0098	Na	
Al	0.0336	Nb	
As	0.0005	Nd	
Au		Ni	(0.0001)
B		O	
Be		P	
Bi	0.0146	Pb	
C		Pd	
Ca	0.12	Pr	
Cd	0.0014	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	(0.0013)	S	
Fe		Sb	0.0009
Ga		Se	
Gd		Si	
Ge		Sn	0.888
H		Sr	
Hf		Ta	
Hg		Te	(0.0003)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0068
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-84X BA12 C
Description Lead Battery Alloy (Pb/Sn/Ca)
Grade
UNS

Ag	0.0051	Na	
Al	0.0158	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.0146	Pb	
C		Pd	
Ca	0.0647	Pr	
Cd	0.0012	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0014	S	
Fe		Sb	0.0029
Ga		Se	
Gd		Si	
Ge		Sn	1.46
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0032
Mo		Zr	
N			

Name MBH-84X BA13 B
Description Lead Battery Alloy (Pb/Sn/Ca)
Grade
UNS

Ag	0.0076	Na	
Al	0.0363	Nb	
As	0.0004	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.0282	Pb	
C		Pd	
Ca	0.0725	Pr	
Cd	0.0014	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.001	S	
Fe		Sb	0.0018
Ga		Se	
Gd		Si	
Ge		Sn	1.685
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0079
Mo		Zr	
N			

Name MBH-84X BA2 D
Description Lead Battery Alloy (Pb/Sn/Ca)
Grade
UNS

Ag	0.0044	Na	
Al	0.0183	Nb	
As	0.0004	Nd	
Au		Ni	(0.0004)
B		O	
Be		P	
Bi	0.023	Pb	
C		Pd	
Ca	0.0756	Pr	
Cd	0.004	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	(0.002)	S	
Fe		Sb	(0.003)
Ga		Se	
Gd		Si	
Ge		Sn	0.544
H		Sr	
Hf		Ta	
Hg		Te	(0.0003)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0273
Mo		Zr	
N			

Name MBH-84X BA21 B
Description Lead Battery Alloy (Pb/Sn/Ca)
Grade
UNS

Ag	0.0102	Na	
Al	0.0125	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.0173	Pb	
C		Pd	
Ca	0.553	Pr	
Cd	0.0007	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	0.0028
Ga		Se	
Gd		Si	
Ge		Sn	0.162
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0155
Mo		Zr	
N			

Name MBH-84X BA23 C
Description Lead Battery Alloy (Pb/Sn/Ca)
Grade
UNS

Ag	0.0031	Na	
Al	0.042	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.021	Pb	
C		Pd	
Ca	1.015	Pr	
Cd	0.0002	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	0.002
Ga		Se	
Gd		Si	
Ge		Sn	0.19
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0033	Y	
Mn		Zn	0.002
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-84X BA3 D

Description Lead Battery Alloy (Pb/Sn/Ca)

Grade

UNS

Ag	0.0062	Na	
Al	0.0043	Nb	
As	<0.001	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.0351	Pb	
C		Pd	
Ca	0.0212	Pr	
Cd	0.0047	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0061	S	
Fe		Sb	(0.006)
Ga		Se	
Gd		Si	
Ge		Sn	0.324
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0032
Mo		Zr	
N			

Name MBH-84X BA4 D

Description Lead Battery Alloy (Pb/Sn/Ca)

Grade

UNS

Ag	0.017	Na	
Al		Nb	
As	<0.001	Nd	
Au		Ni	(<0.001)
B		O	
Be		P	
Bi	0.015	Pb	
C		Pd	
Ca	<0.001	Pr	
Cd	0.013	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.027	S	
Fe		Sb	0.013
Ga		Se	
Gd		Si	
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	0.039
In	0.003	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0035
Mo		Zr	
N			

Name MBH-84X BA7 B

Description Lead Battery Alloy (Pb/Sn/Ca)

Grade

UNS

Ag	0.0015	Na	
Al	0.0085	Nb	
As	(0.0004)	Nd	
Au		Ni	(0.0003)
B		O	
Be		P	
Bi	0.014	Pb	
C		Pd	
Ca	0.0391	Pr	
Cd	0.0004	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.002	S	
Fe		Sb	0.0022
Ga		Se	
Gd		Si	
Ge		Sn	0.594
H		Sr	
Hf		Ta	
Hg		Te	(0.0002)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0024
Mo		Zr	
N			

Name MBH-84X BA8 D

Description Lead Battery Alloy (Pb/Sn/Ca)

Grade

UNS

Ag	0.0035	Na	
Al	0.0359	Nb	
As	0.0005	Nd	
Au		Ni	0.0002
B		O	
Be		P	
Bi	0.0147	Pb	
C		Pd	
Ca	0.136	Pr	
Cd	0.00043	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0008	S	
Fe		Sb	0.0043
Ga		Se	
Gd		Si	
Ge		Sn	0.325
H		Sr	
Hf		Ta	
Hg		Te	(0.00024)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0018
Mo		Zr	
N			

Name MBH-84X BA8 E

Description Lead Battery Alloy (Pb/Sn/Ca)

Grade

UNS

Ag	0.003	Na	
Al	0.0034	Nb	
As		Nd	
Au		Ni	(<0.001)
B		O	
Be		P	
Bi	0.014	Pb	
C		Pd	
Ca	0.117	Pr	
Cd	0.0005	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0008	S	
Fe		Sb	0.002
Ga		Se	
Gd		Si	
Ge		Sn	0.29
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0005	Y	
Mn		Zn	0.0018
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-84X BA9 C
Description Lead Battery Alloy (Pb/Sn/Ca)
Grade
UNS

Ag	0.0023	Na	
Al	0.0207	Nb	
As	(0.0005)	Nd	
Au		Ni	(0.0001)
B		O	
Be		P	
Bi	0.0145	Pb	
C		Pd	
Ca	0.118	Pr	
Cd	0.0011	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0021	S	
Fe		Sb	(0.005)
Ga		Se	
Gd		Si	
Ge		Sn	2.94
H		Sr	
Hf		Ta	
Hg		Te	(0.0003)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0017
Mo		Zr	
N			

Name MBH-84X BA1 L
Description Lead Battery Alloy (Pb/Sn/Ca)
Grade
UNS

Ag	0.0092	Na	
Al	0.0317	Nb	
As	(<0.001)	Nd	
Au		Ni	0.00009
B		O	
Be		P	
Bi	0.0125	Pb	
C		Pd	
Ca	0.109	Pr	
Cd	0.00223	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	0.00062
Ga		Se	
Gd		Si	
Ge		Sn	0.993
H		Sr	
Hf		Ta	
Hg		Te	(<0.001)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.00094	Y	
Mn		Zn	0.0064
Mo		Zr	
N			

Name MBH-168X PBSUS1 D
Description Lead - Setting Up Sample
Grade
UNS

Ag	0.01	Na	
Al		Nb	
As	0.37	Nd	
Au	0.001	Ni	0.003
B		O	
Be		P	
Bi	0.04	Pb	
C		Pd	
Ca		Pr	
Cd	0.015	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.03	S	0.002
Fe	0.002	Sb	6.2
Ga		Se	0.01
Gd		Si	
Ge		Sn	1.3
H		Sr	
Hf		Ta	
Hg		Te	0.01
In	0.01	Ti	
Ir		Tl	0.001
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.001
Mo		Zr	
N			

Name MBH-86X PSS2 C
Description Lead Babbitts
Grade
UNS

Ag	0.02	Na	
Al		Nb	
As	0.52	Nd	
Au		Ni	0.001
B		O	
Be		P	
Bi	0.06	Pb	
C		Pd	
Ca		Pr	
Cd	0.21	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.14	S	
Fe	0.001	Sb	8.9
Ga		Se	
Gd		Si	
Ge		Sn	6.5
H		Sr	
Hf		Ta	
Hg		Te	0.003
In	0.016	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.001
Mo		Zr	
N			

Name MBH-86X PSS4 C
Description Lead Babbitts
Grade
UNS

Ag	0.0279	Na	
Al		Nb	
As	0.202	Nd	
Au		Ni	0.0005
B		O	
Be		P	
Bi	0.119	Pb	
C		Pd	
Ca		Pr	
Cd	0.0575	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.113	S	
Fe	0.0012	Sb	16.18
Ga		Se	
Gd		Si	
Ge		Sn	10.22
H		Sr	
Hf		Ta	
Hg		Te	0.0071
In	0.0194	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0156
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-168X PBSUS PM1
Description Lead for fire assay -
 Setting Up Sample
Grade
UNS

Name MBH-83X PR12 B
Description Lead with Impurities
Grade
UNS

Name MBH-85X PSB10 C
Description Lead/Antimony
Grade
UNS

Name MBH-85X PSN2 D
Description Lead/Tin
Grade
UNS L54210

Name MBH-81X PA0.5 C
Description Lead-Antimony Binary
Grade
UNS

Ag	0.004	Na	
Al		Nb	
As	0.00002	Nd	
Au	0.0035	Ni	0.0003
B		O	
Be		P	
Bi	0.01	Pb	
C		Pd	0.002
Ca		Pr	
Cd		Pt	0.0055
Ce		Re	
Co		Rh	0.0012
Cr		Ru	0.00001
Cu	0.0005	S	0.0002
Fe	0.0001	Sb	0.0001
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	0.0001
In		Ti	
Ir	0.0002	Tl	0.001
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag	0.0021	Na	
Al		Nb	
As	(0.0005)	Nd	
Au		Ni	0.0009
B		O	
Be		P	
Bi	0.0116	Pb	
C		Pd	
Ca		Pr	
Cd	0.00104	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.036	S	(0.001)
Fe	0.0007	Sb	(0.0009)
Ga		Se	(0.0005)
Gd		Si	
Ge		Sn	0.0007
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	(0.01)
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag	0.0018	Na	
Al		Nb	
As	0.113	Nd	
Au		Ni	0.0018
B		O	
Be		P	
Bi	0.04	Pb	
C		Pd	
Ca		Pr	
Cd	0.0015	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.147	S	(0.002)
Fe		Sb	10
Ga		Se	0.0019
Gd		Si	
Ge		Sn	0.134
H		Sr	
Hf		Ta	
Hg		Te	0.004
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0122
Mo		Zr	
N			

Ag	0.0034	Na	
Al		Nb	
As	0.0022	Nd	
Au		Ni	0.0011
B		O	
Be		P	
Bi	0.026	Pb	
C		Pd	
Ca		Pr	
Cd	0.00057	Pt	
Ce		Re	
Co	(0.0002)	Rh	
Cr		Ru	
Cu	0.031	S	(0.0009)
Fe	0.001	Sb	0.02
Ga		Se	0.0025
Gd		Si	
Ge		Sn	1.9
H		Sr	
Hf		Ta	
Hg		Te	(0.0035)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0007
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	0.481
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-81X PA1.0 C ↓

Description Lead-Antimony Binary

Grade

UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	0.989
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-81X PA3.5 E

Description Lead-Antimony Binary

Grade

UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	3.49
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-81X PMg1 A

Description Lead-Magnesium Binary

Grade

UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	1.15	Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-81X PMg2 A

Description Lead-Magnesium Binary

Grade

UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.173	Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-81X PMg3 A

Description Lead-Magnesium Binary

Grade

UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.023	Y	
Mn		Zn	
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-82X PAg 1.5R E

Description Lead-Silver Alloy

Grade

UNS

Ag	1.55	Na	
Al		Nb	
As	0.005	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.065	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.27	S	
Fe		Sb	0.386
Ga		Se	
Gd		Si	
Ge		Sn	0.036
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.004)
Mo		Zr	
N			

Name MBH-82X PAg 2.5R D

Description Lead-Silver Alloy

Grade

UNS

Ag	2.21	Na	
Al		Nb	
As	0.009	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.13	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.26	S	
Fe		Sb	0.246
Ga		Se	
Gd		Si	
Ge		Sn	0.082
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0024)
Mo		Zr	
N			

Name MBH-82X PAg 3.5R D

Description Lead-Silver Alloy

Grade

UNS

Ag	3.54	Na	
Al	0.0015	Nb	
As	0.02	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.29	Pb	
C		Pd	
Ca		Pr	
Cd	0.0027	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.073	S	
Fe	(<0.001)	Sb	0.106
Ga		Se	
Gd		Si	
Ge		Sn	0.25
H		Sr	
Hf		Ta	
Hg		Te	
In	0.037	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0004)
Mo		Zr	
N			

Name MBH-82X PA0.7 A ↓

Description Lead-Silver Alloy

Grade

UNS

Ag	0.733	Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-85X 0494Pb1 A

Description Various Lead Alloy

Grade

UNS

Ag		Na	
Al		Nb	
As	0.049	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.0017	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.012	S	
Fe		Sb	0.95
Ga		Se	0.004
Gd		Si	
Ge		Sn	0.051
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-85X 0494Pb3 D

Description Various Lead Alloy

Grade

UNS

Ag	0.0186	Na	
Al		Nb	
As	0.245	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.126	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0974	S	0.0185
Fe	0.0005	Sb	2.99
Ga		Se	0.049
Gd		Si	
Ge		Sn	0.221
H		Sr	
Hf		Ta	
Hg		Te	0.0155
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-85X 0616Pb1 D

Description Various Lead Alloy

Grade

UNS

Ag	0.0089	Na	
Al		Nb	
As	0.06	Nd	
Au		Ni	0.0007
B		O	
Be		P	
Bi	0.0365	Pb	
C		Pd	
Ca		Pr	
Cd	0.0018	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0158	S	
Fe		Sb	1.539
Ga		Se	0.0047
Gd		Si	
Ge		Sn	(0.002)
H		Sr	
Hf		Ta	
Hg	(0.001)	Te	0.0082
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.001)
Mo		Zr	
N			

Name MBH-85X 9494Pb2 C

Description Various Lead Alloy

Grade

UNS

Ag	0.0279	Na	
Al		Nb	
As	0.102	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.0387	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0279	S	0.0052
Fe	<0.001	Sb	1.928
Ga		Se	0.0272
Gd		Si	
Ge		Sn	0.124
H		Sr	
Hf		Ta	
Hg		Te	0.0038
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-85X ANTH F

Description Various Lead Alloy

Grade

UNS

Ag	0.007	Na	
Al		Nb	
As	0.183	Nd	
Au		Ni	0.0045
B		O	
Be		P	
Bi	0.0196	Pb	
C		Pd	
Ca		Pr	
Cd	0.0039	Pt	
Ce		Re	
Co	0.0006	Rh	
Cr		Ru	
Cu	0.0072	S	0.0026
Fe	(0.0004)	Sb	6.25
Ga		Se	0.014
Gd		Si	
Ge		Sn	1.25
H		Sr	
Hf		Ta	
Hg		Te	0.0067
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0005
Mo		Zr	
N			

Name MBH-85X CADH C ↓

Description Various Lead Alloy

Grade

UNS

Ag	0.0093	Na	
Al		Nb	
As	0.0918	Nd	
Au		Ni	0.0007
B		O	
Be		P	
Bi	0.0138	Pb	
C		Pd	
Ca		Pr	
Cd	2.01	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.013	S	
Fe	0.001	Sb	1.89
Ga		Se	
Gd		Si	
Ge		Sn	0.115
H		Sr	
Hf		Ta	
Hg		Te	0.0035
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0004)
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-85X CADL B
Description Various Lead Alloy
Grade
UNS

Name MBH-85X HRH H
Description Various Lead Alloy
Grade
UNS

Name MBH-85X M2 A
Description Various Lead Alloy
Grade
UNS

Name MBH-85X MS2X A
Description Various Lead Alloy
Grade
UNS

Name MBH-85X N35 A
Description Various Lead Alloy
Grade
UNS

Ag	0.0132	Na	
Al		Nb	
As	0.102	Nd	
Au		Ni	0.0002
B		O	
Be		P	
Bi	0.0489	Pb	
C		Pd	
Ca		Pr	
Cd	1.22	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0384	S	
Fe	0.0008	Sb	2
Ga		Se	
Gd		Si	
Ge		Sn	0.0182
H		Sr	
Hf		Ta	
Hg		Te	(<0.001)
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.011)
Mo		Zr	
N			

Ag	0.236	Na	
Al		Nb	
As	0.721	Nd	
Au		Ni	0.0012
B		O	
Be		P	
Bi	0.0996	Pb	
C		Pd	
Ca		Pr	
Cd	0.0066	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.072	S	(0.0022)
Fe		Sb	1.107
Ga		Se	0.0375
Gd		Si	
Ge		Sn	0.851
H		Sr	
Hf		Ta	
Hg		Te	0.0024
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag	0.0016	Na	
Al		Nb	
As	0.259	Nd	
Au		Ni	0.0005
B		O	
Be		P	
Bi	0.0141	Pb	
C		Pd	
Ca		Pr	
Cd	0.0003	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0281	S	(0.0008)
Fe	(0.0002)	Sb	1.847
Ga		Se	0.0247
Gd		Si	
Ge		Sn	0.071
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0001)
Mo		Zr	
N			

Ag	0.0043	Na	
Al		Nb	
As	0.176	Nd	
Au		Ni	0.0004
B		O	
Be		P	
Bi	0.0188	Pb	
C		Pd	
Ca		Pr	
Cd	0.0002	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0277	S	(0.0002)
Fe	(0.0001)	Sb	1.367
Ga		Se	0.0334
Gd		Si	
Ge		Sn	0.392
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0003
Mo		Zr	
N			

Ag	0.0011	Na	
Al		Nb	
As	0.201	Nd	
Au		Ni	0.0006
B		O	
Be		P	
Bi	0.013	Pb	
C		Pd	
Ca		Pr	
Cd	0.00013	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0246	S	0.007
Fe	(0.0001)	Sb	3.42
Ga		Se	0.0004
Gd		Si	
Ge		Sn	0.044
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0001
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-85X PSb10 B

Description Various Lead Alloy

Grade

UNS

Ag	0.002	Na	
Al		Nb	
As	0.127	Nd	
Au		Ni	0.0027
B		O	
Be		P	
Bi	0.041	Pb	
C		Pd	
Ca		Pr	
Cd	0.0018	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.169	S	(<0.001)
Fe		Sb	10
Ga		Se	0.002
Gd		Si	
Ge		Sn	0.09
H		Sr	
Hf		Ta	
Hg		Te	0.0037
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.015
Mo		Zr	
N			

Name MBH-85X PSb12 B

Description Various Lead Alloy

Grade

UNS

Ag	0.0019	Na	
Al		Nb	
As	0.071	Nd	
Au		Ni	0.0033
B		O	
Be		P	
Bi	0.031	Pb	
C		Pd	
Ca		Pr	
Cd	0.00053	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.33	S	(<0.001)
Fe		Sb	11.5
Ga		Se	0.0004
Gd		Si	
Ge		Sn	0.27
H		Sr	
Hf		Ta	
Hg		Te	0.0056
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.071
Mo		Zr	
N			

Name MBH-85X PSB28 A

Description Various Lead Alloy

Grade

UNS

Ag	0.0014	Na	
Al		Nb	
As	0.24	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.011	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.01	S	0.0015
Fe		Sb	2.78
Ga		Se	0.01
Gd		Si	
Ge		Sn	0.065
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-85X PSB33 A

Description Various Lead Alloy

Grade

UNS

Ag	0.0014	Na	
Al		Nb	
As	0.14	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.011	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.036	S	0.0008
Fe		Sb	3.25
Ga		Se	0.021
Gd		Si	
Ge		Sn	0.21
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-85X PSb5 F

Description Various Lead Alloy

Grade

UNS

Ag	0.0038	Na	
Al		Nb	
As	0.221	Nd	
Au		Ni	0.0018
B		O	
Be		P	
Bi	0.0267	Pb	
C		Pd	
Ca		Pr	
Cd	0.0011	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0361	S	0.0056
Fe		Sb	4.69
Ga		Se	0.0077
Gd		Si	
Ge		Sn	0.207
H		Sr	
Hf		Ta	
Hg		Te	0.0007
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0009
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-85X PSb5 G
Description Various Lead Alloy
Grade
UNS

Name MBH-85X PSb6 A
Description Various Lead Alloy
Grade
UNS

Name MBH-85X PSB60 A
Description Various Lead Alloy
Grade
UNS

Name MBH-85X PSb8 B ↓
Description Various Lead Alloy
Grade
UNS

Name MBH-85X S744 A
Description Various Lead Alloy
Grade
UNS

Ag	0.003	Na	
Al		Nb	
As	0.25	Nd	
Au		Ni	0.0008
B		O	
Be		P	
Bi	0.012	Pb	
C		Pd	
Ca		Pr	
Cd	0.0005	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.051	S	0.009
Fe		Sb	4.65
Ga		Se	0.014
Gd		Si	
Ge		Sn	0.29
H		Sr	
Hf		Ta	
Hg		Te	0.0015
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0002
Mo		Zr	
N			

Ag	0.0459	Na	
Al		Nb	
As	0.111	Nd	
Au		Ni	0.0021
B		O	
Be		P	
Bi	0.027	Pb	
C		Pd	
Ca		Pr	
Cd	0.0046	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0651	S	
Fe		Sb	6.51
Ga		Se	0.0018
Gd		Si	
Ge		Sn	0.065
H		Sr	
Hf		Ta	
Hg		Te	0.0108
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag	0.0011	Na	
Al		Nb	
As	0.078	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.009	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.04	S	0.003
Fe		Sb	5.9
Ga		Se	0.008
Gd		Si	
Ge		Sn	0.025
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag	0.0049	Na	
Al		Nb	
As	0.0352	Nd	
Au		Ni	0.0016
B		O	
Be		P	
Bi	0.0178	Pb	
C		Pd	
Ca		Pr	
Cd	0.001	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0169	S	0.005
Fe		Sb	8.04
Ga		Se	0.0022
Gd		Si	
Ge		Sn	0.041
H		Sr	
Hf		Ta	
Hg		Te	0.0043
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(<0.001)
Mo		Zr	
N			

Ag	0.0046	Na	
Al		Nb	
As	0.125	Nd	
Au		Ni	0.0005
B		O	
Be		P	
Bi	0.0182	Pb	
C		Pd	
Ca		Pr	
Cd	0.0003	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0366	S	0.0028
Fe	<0.001	Sb	1.532
Ga		Se	0.0253
Gd		Si	
Ge		Sn	0.237
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0002
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-85X SASH A

Description Various Lead Alloy

Grade

UNS

Ag	0.0016	Na	
Al		Nb	
As	0.683	Nd	
Au		Ni	0.0005
B		O	
Be		P	
Bi	0.0602	Pb	
C		Pd	
Ca		Pr	
Cd	0.00024	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0245	S	(0.0005)
Fe		Sb	1.54
Ga		Se	
Gd		Si	
Ge		Sn	0.013
H		Sr	
Hf		Ta	
Hg		Te	0.0006
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-85X SB28 A

Description Various Lead Alloy

Grade

UNS

Ag	0.0025	Na	
Al		Nb	
As	0.162	Nd	
Au		Ni	0.0012
B		O	
Be		P	
Bi	0.014	Pb	
C		Pd	
Ca		Pr	
Cd	(0.0001)	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0035	S	0.001
Fe	(0.0002)	Sb	2.87
Ga		Se	0.0223
Gd		Si	
Ge		Sn	0.051
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0001)
Mo		Zr	
N			

Name MBH-85X SSBC A

Description Various Lead Alloy

Grade

UNS

Ag	0.456	Na	
Al		Nb	
As	0.075	Nd	
Au	0.0079	Ni	
B		O	
Be		P	
Bi	0.413	Pb	
C		Pd	
Ca		Pr	
Cd	0.455	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	(0.0008)
Fe		Sb	2.14
Ga		Se	0.0029
Gd		Si	
Ge		Sn	9.7
H		Sr	
Hf		Ta	
Hg		Te	0.0037
In	0.209	Ti	
Ir		Tl	0.0196
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-85X YUM A

Description Various Lead Alloy

Grade

UNS

Ag	0.0018	Na	
Al		Nb	
As	0.306	Nd	
Au		Ni	0.0007
B		O	
Be		P	
Bi	0.0137	Pb	
C		Pd	
Ca		Pr	
Cd	0.0002	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0234	S	0.0062
Fe		Sb	2.47
Ga		Se	0.0008
Gd		Si	
Ge		Sn	0.0046
H		Sr	
Hf		Ta	
Hg		Te	0.0005
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0002)
Mo		Zr	
N			

Name MBH-95X 117 A

Description Fusible Alloy/Solder

Grade

UNS

Ag	0.0047	Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	45.3	Pb	23.1
C		Pd	
Ca		Pr	
Cd	4.99	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.011	S	
Fe		Sb	0.012
Ga		Se	
Gd		Si	
Ge		Sn	7.99
H		Sr	
Hf		Ta	
Hg		Te	
In	18.6	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0053
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-95X 136 A ↓
Description Fusible Alloy/Solder
Grade
UNS

Ag	0.0057	Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	48.7	Pb	17.8
C		Pd	
Ca		Pr	
Cd	0.0091	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0029	S	
Fe		Sb	0.023
Ga		Se	
Gd		Si	
Ge		Sn	12.05
H		Sr	
Hf		Ta	
Hg		Te	
In	21.5	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.03
Mo		Zr	
N			

Name MBH-95X 158 A
Description Fusible Alloy/Solder
Grade
UNS

Ag	0.002	Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	50.2	Pb	27
C		Pd	
Ca		Pr	
Cd	9.6	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.048	S	
Fe		Sb	0.057
Ga		Se	
Gd		Si	
Ge		Sn	13.5
H		Sr	
Hf		Ta	
Hg		Te	
In	0.006	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.044
Mo		Zr	
N			

Name MBH-95X 174 A
Description Fusible Alloy/Solder
Grade
UNS

Ag	0.0076	Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	57.12	Pb	0.081
C		Pd	
Ca		Pr	
Cd	0.0089	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0029	S	
Fe		Sb	0.082
Ga		Se	
Gd		Si	
Ge		Sn	16.79
H		Sr	
Hf		Ta	
Hg		Te	
In	26.2	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.036
Mo		Zr	
N			

Name MBH-95X 255 A
Description Fusible Alloy/Solder
Grade
UNS

Ag	0.0019	Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	55.7	Pb	43.7
C		Pd	
Ca		Pr	
Cd	0.0065	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.045	S	
Fe		Sb	0.32
Ga		Se	
Gd		Si	
Ge		Sn	0.24
H		Sr	
Hf		Ta	
Hg		Te	
In	0.01	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.035
Mo		Zr	
N			

Name MBH-95X BIS40P1 B
Description Fusible Alloy/Solder
Grade
UNS

Ag	0.035	Na	
Al		Nb	
As	0.0101	Nd	
Au		Ni	
B		O	
Be		P	
Bi	57.4	Pb	0.043
C		Pd	
Ca		Pr	
Cd	0.005	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.067	S	
Fe	(0.001)	Sb	0.092
Ga		Se	
Gd		Si	
Ge		Sn	42.3
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0164	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-95X BIS40P2 A

Description Fusible Alloy/Solder

Grade

UNS

Ag	0.005	Na	
Al	0.002	Nb	
As	0.002	Nd	
Au	0.0006	Ni	0.002
B		O	
Be		P	
Bi	55.3	Pb	0.02
C		Pd	
Ca		Pr	
Cd	0.0008	Pt	
Ce		Re	
Co	0.001	Rh	
Cr		Ru	
Cu	0.003	S	
Fe	0.001	Sb	0.005
Ga		Se	
Gd		Si	
Ge		Sn	44.7
H		Sr	
Hf		Ta	
Hg		Te	
In	0.005	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.002
Mo		Zr	
N			

Name MBH-95X BISS0P3 A

Description Fusible Alloy/Solder

Grade

UNS

Ag	1.5	Na	
Al		Nb	
As	0.073	Nd	
Au	0.0025	Ni	
B		O	
Be		P	
Bi	49.8	Pb	
C		Pd	
Ca		Pr	
Cd	0.015	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe	0.003	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	48.6
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.002
Mo		Zr	
N			

Name MBH-95X BIS70P2 A

Description Fusible Alloy/Solder

Grade

UNS

Ag	2.01	Na	
Al	<0.001	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	32.8	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	65
H		Sr	
Hf		Ta	
Hg		Te	
In	0.049	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.001
Mo		Zr	
N			

Name MBH-95X BIS70P2 A

Description Fusible Alloy/Solder

Grade

UNS

Ag	2.01	Na	
Al	<0.001	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	32.8	Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	65
H		Sr	
Hf		Ta	
Hg		Te	
In	0.049	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.001
Mo		Zr	
N			

Name MBH-95X PBS40P1 A

Description Fusible Alloy/Solder

Grade

UNS

Ag	0.011	Na	
Al	(0.0006)	Nb	
As	0.005	Nd	
Au		Ni	
B		O	
Be		P	
Bi	13.8	Pb	(43.6)
C		Pd	
Ca		Pr	
Cd	0.0043	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.025	S	
Fe	(0.0006)	Sb	0.016
Ga		Se	
Gd		Si	
Ge		Sn	42.6
H		Sr	
Hf		Ta	
Hg		Te	
In	0.005	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.001
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-91X S10PR1 C

Description Tin-Lead Solders

Grade

UNS

Ag	0.0078	Na	
Al		Nb	
As	0.0045	Nd	
Au		Ni	0.0006
B		O	
Be		P	
Bi	0.0277	Pb	
C		Pd	
Ca		Pr	
Cd	0.0029	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0097	S	
Fe	(0.0016)	Sb	0.0278
Ga		Se	
Gd		Si	
Ge		Sn	9.1
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	<0.001
Mo		Zr	
N			

Name MBH-91X S30PR2 C

Description Tin-Lead Solders

Grade

UNS

Ag	0.06	Na	
Al	<0.0005	Nb	
As	0.028	Nd	
Au	0.0017	Ni	0.0077
B		O	
Be		P	
Bi	0.158	Pb	
C		Pd	
Ca		Pr	
Cd	0.006	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.095	S	
Fe	0.009	Sb	0.619
Ga		Se	
Gd		Si	
Ge		Sn	30.17
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.016
Mo		Zr	
N			

Name MBH-91X S40P D

Description Tin-Lead Solders

Grade

UNS

Ag	(0.001)	Na	
Al	<0.0005	Nb	
As	(0.007)	Nd	
Au		Ni	(<0.001)
B		O	
Be		P	
Bi	(0.005)	Pb	
C		Pd	
Ca		Pr	
Cd	(<0.0001)	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	(0.001)	S	
Fe	(0.001)	Sb	(0.002)
Ga		Se	
Gd		Si	
Ge		Sn	40
H		Sr	
Hf		Ta	
Hg		Te	
In	(0.002)	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	<0.0001
Mo		Zr	
N			

Name MBH-91X S40PR2 D ↓

Description Tin-Lead Solders

Grade

UNS

Ag	0.086	Na	
Al		Nb	
As	0.01	Nd	
Au		Ni	0.005
B		O	
Be		P	
Bi	0.154	Pb	
C		Pd	
Ca		Pr	
Cd	0.0046	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.085	S	
Fe	0.0096	Sb	0.596
Ga		Se	
Gd		Si	
Ge		Sn	40.68
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0275
Mo		Zr	
N			

Name MBH-91X S50PR4 B

Description Tin-Lead Solders

Grade

UNS

Ag	0.0704	Na	
Al	(0.0006)	Nb	
As	0.0364	Nd	
Au	0.0355	Ni	0.0171
B		O	
Be		P	
Bi	0.114	Pb	
C		Pd	
Ca		Pr	
Cd	0.0123	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	1.184	S	
Fe	0.0025	Sb	0.132
Ga		Se	0.003
Gd		Si	
Ge		Sn	53.06
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0502	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.032
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-91X S62AG2 A

Description Tin-Lead Solders

Grade

UNS

Ag	2.03	Na	
Al	(0.0011)	Nb	
As	0.022	Nd	
Au	0.002	Ni	(0.0016)
B		O	
Be		P	
Bi	0.168	Pb	
C		Pd	
Ca		Pr	
Cd	0.0016	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.069	S	
Fe	0.0065	Sb	0.347
Ga		Se	
Gd		Si	
Ge		Sn	61.68
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0011
Mo		Zr	
N			

Name MBH-91X S63B11 A

Description Tin-Lead Solders

Grade

UNS

Ag	0.0592	Na	
Al	(0.0015)	Nb	
As	<0.002	Nd	
Au	0.074	Ni	0.0131
B		O	
Be		P	
Bi	0.597	Pb	
C		Pd	
Ca		Pr	
Cd	0.0095	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.105	S	
Fe	0.0204	Sb	0.47
Ga		Se	
Gd		Si	
Ge		Sn	61.9
H		Sr	
Hf		Ta	
Hg		Te	0.0012
In	0.0067	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.002)
Mo		Zr	
N			

Name MBH-91X S63PR0 B

Description Tin-Lead Solders

Grade

UNS

Ag	0.0097	Na	
Al		Nb	
As	0.0094	Nd	
Au	0.0148	Ni	0.0018
B		O	
Be		P	
Bi	0.0084	Pb	
C		Pd	
Ca		Pr	
Cd	0.0097	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0202	S	
Fe	(0.0024)	Sb	0.018
Ga		Se	
Gd		Si	
Ge		Sn	60.03
H		Sr	
Hf		Ta	
Hg	0.004	Te	0.0034
In	0.0048	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	<0.0005
Mo		Zr	
N			

Name MBH-91X S63PR0 C

Description Tin-Lead Solders

Grade

UNS

Ag	0.02	Na	
Al		Nb	
As	0.016	Nd	
Au	0.0005	Ni	0.004
B		O	
Be		P	
Bi	0.01	Pb	
C		Pd	
Ca		Pr	
Cd	0.0125	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.024	S	
Fe	0.0015	Sb	0.024
Ga		Se	
Gd		Si	
Ge		Sn	60
H		Sr	
Hf		Ta	
Hg	0.008	Te	0.0005
In	0.01	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0004
Mo		Zr	
N			

Name MBH-91X S63PRI G

Description Tin-Lead Solders

Grade

UNS

Ag	0.0061	Na	
Al		Nb	
As	0.0064	Nd	
Au	0.0348	Ni	0.006
B		O	
Be		P	
Bi	0.0588	Pb	
C		Pd	
Ca		Pr	
Cd	0.0045	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.214	S	
Fe	(0.002)	Sb	0.052
Ga		Se	
Gd		Si	
Ge		Sn	61.45
H		Sr	
Hf		Ta	
Hg	(0.015)	Te	0.0047
In	0.0308	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.002)
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-91X S63PR2 K ↓

Description Tin-Lead Solders

Grade

UNS

Ag	0.0528	Na	
Al	0.0005	Nb	
As	0.0094	Nd	
Au	0.082	Ni	0.0027
B		O	
Be		P	
Bi	0.175	Pb	
C		Pd	
Ca		Pr	
Cd	0.0089	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0841	S	
Fe	0.0053	Sb	0.531
Ga		Se	
Gd		Si	
Ge		Sn	61.84
H		Sr	
Hf		Ta	
Hg		Te	0.0036
In	0.0157	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0032
Mo		Zr	
N			

Name MBH-91X S63PR3 G

Description Tin-Lead Solders

Grade

UNS

Ag	0.0193	Na	
Al		Nb	
As	0.0264	Nd	
Au	0.169	Ni	0.0085
B		O	
Be		P	
Bi	0.254	Pb	
C		Pd	
Ca		Pr	
Cd	0.0009	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.101	S	
Fe	0.0078	Sb	0.243
Ga		Se	
Gd		Si	
Ge		Sn	64.01
H		Sr	
Hf		Ta	
Hg	(0.038)	Te	0.0068
In	0.0097	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0061
Mo		Zr	
N			

Name MBH-93X S30APR1 C

Description Tin-Lead-Antimony Solders

Grade

UNS

Ag	0.0144	Na	
Al		Nb	
As	0.01	Nd	
Au		Ni	0.001
B		O	
Be		P	
Bi	0.059	Pb	
C		Pd	
Ca		Pr	
Cd	0.0014	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.192	S	
Fe	(0.012)	Sb	2.54
Ga		Se	
Gd		Si	
Ge		Sn	28.58
H		Sr	
Hf		Ta	
Hg		Te	0.0024
In	0.0094	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0004)
Mo		Zr	
N			

Name MBH-93X S30APR2 C ↓

Description Tin-Lead-Antimony Solders

Grade

UNS

Ag	0.049	Na	
Al		Nb	
As	0.0178	Nd	
Au		Ni	0.042
B		O	
Be		P	
Bi	0.168	Pb	
C		Pd	
Ca		Pr	
Cd	0.0061	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.062	S	
Fe	0.0026	Sb	1.8
Ga		Se	
Gd		Si	
Ge		Sn	30.68
H		Sr	
Hf		Ta	
Hg		Te	0.0102
In	0.0199	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.028
Mo		Zr	
N			

Name MBH-1611X SNSUS6

Description Tin - Setting Up Sample

Grade

UNS

Ag	0.1	Na	
Al		Nb	
As	0.3	Nd	
Au	0.001	Ni	0.03
B		O	
Be		P	
Bi	0.08	Pb	1
C		Pd	
Ca		Pr	
Cd	0.01	Pt	
Ce		Re	
Co	0.02	Rh	
Cr		Ru	
Cu	0.4	S	
Fe	0.03	Sb	0.15
Ga		Se	0.003
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	0.001
In	0.005	Ti	
Ir		Tl	0.005
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.005
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-1611X SNSUS7

Description Tin - Setting Up Sample

Grade

UNS

Ag	0.15	Na	
Al	(<0.001)	Nb	
As	1.9	Nd	
Au	0.005	Ni	0.09
B		O	
Be		P	
Bi	2.4	Pb	0.35
C		Pd	
Ca		Pr	
Cd	0.02	Pt	
Ce		Re	
Co	0.01	Rh	
Cr		Ru	
Cu	11	S	
Fe	(0.06)	Sb	11
Ga		Se	0.005
Gd		Si	
Ge	0.002	Sn	
H		Sr	
Hf		Ta	
Hg		Te	0.005
In	0.05	Ti	
Ir		Tl	0.025
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.001)
Mo		Zr	
N			

Name MBH-74X AB1 A

Description Tin Lead-Free Solders

Grade

UNS

Ag	3.58	Na	
Al		Nb	
As	0.028	Nd	
Au	0.001	Ni	0.0036
B		O	
Be		P	
Bi	0.997	Pb	0.0353
C		Pd	
Ca		Pr	
Cd	0.0199	Pt	
Ce		Re	
Co	0.0032	Rh	
Cr		Ru	
Cu	0.0285	S	
Fe	0.0435	Sb	0.0111
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0262	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-74X AM F

Description Tin Lead-Free Solders

Grade

UNS

Ag	0.496	Na	
Al	(0.001)	Nb	
As	0.0038	Nd	
Au		Ni	0.026
B		O	
Be		P	(0.002)
Bi	0.19	Pb	0.126
C		Pd	
Ca		Pr	
Cd	0.0061	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	3.07	S	
Fe	(0.001)	Sb	1.064
Ga		Se	(0.001)
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0082	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.006)
Mo		Zr	
N			

Name MBH-74X BZ1 A

Description Tin Lead-Free Solders

Grade

UNS

Ag	0.004	Na	
Al	0.0021	Nb	
As	0.0119	Nd	
Au		Ni	0.0097
B		O	
Be		P	
Bi	3.03	Pb	0.0238
C		Pd	
Ca		Pr	
Cd	0.0012	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.026	S	
Fe	0.011	Sb	0.031
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	8.27
Mo		Zr	
N			

Name MBH-74X CA1 B ↓

Description Tin Lead-Free Solders

Grade

UNS

Ag	0.44	Na	
Al	0.0262	Nb	
As		Nd	
Au	0.0053	Ni	
B		O	
Be		P	
Bi	0.0131	Pb	0.077
C		Pd	
Ca		Pr	
Cd	0.0071	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.682	S	
Fe		Sb	0.0169
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-74X CA2 C

Description Tin Lead-Free Solders

Grade

UNS

Ag	3.5	Na	
Al		Nb	
As	0.0145	Nd	
Au	0.0016	Ni	0.0336
B		O	
Be		P	0.005
Bi	0.0298	Pb	0.057
C		Pd	
Ca		Pr	
Cd	0.0039	Pt	
Ce		Re	
Co	0.0025	Rh	
Cr		Ru	
Cu	0.797	S	
Fe	0.0038	Sb	0.0806
Ga		Se	
Gd		Si	
Ge	0.014	Sn	
H		Sr	
Hf		Ta	
Hg	0.0054	Te	
In	0.0084	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0015
Mo		Zr	
N			

Name MBH-74X CA4 D

Description Tin Lead-Free Solders

Grade

UNS

Ag	3.07	Na	
Al		Nb	
As	0.003	Nd	
Au	0.002	Ni	0.0588
B		O	
Be		P	
Bi	0.0512	Pb	0.081
C		Pd	
Ca		Pr	
Cd	0.0025	Pt	
Ce		Re	
Co	0.0005	Rh	
Cr	0.001	Ru	
Cu	0.552	S	
Fe	0.004	Sb	0.0612
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.0075	Te	
In	0.009	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0051
Mo		Zr	
N			

Name MBH-74X CA5 B

Description Tin Lead-Free Solders

Grade

UNS

Ag	4.09	Na	
Al	(0.001)	Nb	
As	0.0125	Nd	
Au	0.0091	Ni	0.0149
B		O	
Be		P	(0.011)
Bi	0.005	Pb	0.044
C		Pd	
Ca		Pr	
Cd	0.0023	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	1.189	S	
Fe	0.0021	Sb	0.124
Ga		Se	0.0004
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.003	Te	
In	0.0129	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.002)
Mo		Zr	
N			

Name MBH-74X CA7 B

Description Tin Lead-Free Solders

Grade

UNS

Ag	4.02	Na	
Al		Nb	
As	0.0085	Nd	
Au		Ni	0.0315
B		O	
Be		P	
Bi	0.0102	Pb	0.107
C		Pd	
Ca		Pr	
Cd	0.0059	Pt	
Ce		Re	
Co	(0.002)	Rh	
Cr	0.0045	Ru	
Cu	0.347	S	
Fe	0.007	Sb	0.0194
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.049	Te	
In	0.0053	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0501
Mo		Zr	
N			

Name MBH-74X CA9 A ↓

Description Tin Lead-Free Solders

Grade

UNS

Ag	1.002	Na	
Al	0.0007	Nb	
As	0.0173	Nd	
Au	0.0025	Ni	0.0039
B		O	
Be		P	0.011
Bi	0.0364	Pb	0.038
C		Pd	
Ca		Pr	
Cd	0.0015	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.097	S	
Fe	0.0085	Sb	0.076
Ga		Se	
Gd		Si	
Ge	0.0049	Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0165	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.001
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-74X E F
Description Tin Lead-Free Solders
Grade
UNS

Ag	0.667	Na	
Al	(0.001)	Nb	
As	0.0092	Nd	
Au		Ni	0.0069
B		O	
Be		P	(0.001)
Bi	0.0099	Pb	0.0248
C		Pd	
Ca		Pr	
Cd	0.0003	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	2.94	S	
Fe	0.0008	Sb	0.0168
Ga		Se	0.0008
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0074	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.005)
Mo		Zr	
N			

Name MBH-74X GE1 A
Description Tin Lead-Free Solders
Grade
UNS

Ag	0.052	Na	
Al	0.065	Nb	
As		Nd	
Au		Ni	0.0289
B		O	
Be		P	
Bi		Pb	0.0339
C		Pd	
Ca		Pr	
Cd	0.0059	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.662	S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge	0.046	Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-74X HA G
Description Tin Lead-Free Solders
Grade
UNS

Ag	2.8	Na	
Al	(0.002)	Nb	
As	0.0032	Nd	
Au		Ni	0.0133
B		O	
Be		P	(0.001)
Bi	0.0639	Pb	0.077
C		Pd	
Ca		Pr	
Cd	0.0018	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.629	S	
Fe	0.0029	Sb	2.1
Ga		Se	(0.001)
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.009	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	2.73
Mo		Zr	
N			

Name MBH-74X HB G
Description Tin Lead-Free Solders
Grade
UNS

Ag	0.086	Na	
Al	(0.003)	Nb	
As	0.045	Nd	
Au		Ni	1.22
B		O	
Be		P	(0.002)
Bi	0.038	Pb	0.056
C		Pd	
Ca		Pr	
Cd	0.0103	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	4.49	S	
Fe	0.0138	Sb	4.81
Ga		Se	0.0038
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0179	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.02)
Mo		Zr	
N			

Name MBH-74X HN F
Description Tin Lead-Free Solders
Grade
UNS

Ag	0.16	Na	
Al	0.0011	Nb	
As	0.016	Nd	
Au		Ni	0.195
B		O	
Be		P	(0.001)
Bi	0.042	Pb	0.005
C		Pd	
Ca		Pr	
Cd	0.0046	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	4.12	S	
Fe	0.02	Sb	0.038
Ga		Se	0.0024
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0052	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0068
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-74X TC F
Description Tin Lead-Free Solders
Grade
UNS

Name MBH-74X WS A
Description Tin Lead-Free Solders
Grade
UNS

Name MBH-73X SC12 B
Description Tin White Metals (Pewter, Babbitt)
Grade
UNS

Name MBH-73X SC13 A
Description Tin White Metals (Pewter, Babbitt)
Grade
UNS

Name MBH-73X SC2 B
Description Tin White Metals (Pewter, Babbitt)
Grade
UNS

Ag	0.039	Na	
Al	(0.001)	Nb	
As	0.024	Nd	
Au		Ni	0.0167
B		O	
Be		P	(0.002)
Bi	0.106	Pb	0.183
C		Pd	
Ca		Pr	
Cd	0.015	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	4.99	S	
Fe	0.0031	Sb	0.124
Ga		Se	0.0473
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0215	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.004
Mo		Zr	
N			

Ag	0.298	Na	
Al	(0.001)	Nb	
As	0.0105	Nd	
Au	(0.0002)	Ni	0.0048
B		O	
Be		P	0.0122
Bi	0.0063	Pb	0.037
C		Pd	
Ca		Pr	
Cd	0.0014	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	4.58	S	
Fe	(0.004)	Sb	1.49
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0032	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0009
Mo		Zr	
N			

Ag	0.842	Na	
Al	0.0015	Nb	
As	(0.034)	Nd	
Au		Ni	0.115
B		O	
Be		P	
Bi	0.0301	Pb	0.091
C		Pd	
Ca		Pr	
Cd	0.758	Pt	
Ce		Re	
Co	0.021	Rh	
Cr		Ru	
Cu	6.03	S	
Fe	0.024	Sb	7.5
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.021
Mo		Zr	
N			

Ag		Na	
Al	(0.01)	Nb	
As	0.054	Nd	
Au		Ni	
B		O	
Be		P	(0.02)
Bi	0.0188	Pb	0.259
C		Pd	
Ca		Pr	
Cd	0.0021	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	4.19	S	
Fe	0.053	Sb	4.21
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0126
Mo		Zr	
N			

Ag	0.0318	Na	
Al		Nb	
As	0.0355	Nd	
Au		Ni	0.0156
B		O	
Be		P	
Bi	0.602	Pb	0.0457
C		Pd	
Ca		Pr	
Cd	0.0282	Pt	
Ce		Re	
Co	0.0217	Rh	
Cr		Ru	
Cu	1.028	S	
Fe	0.0037	Sb	3.05
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0099	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.0007)
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-73X SC4 B
Description Tin White Metals (Pewter, Babbit)
Grade
UNS

Ag	0.0525	Na	
Al	(0.002)	Nb	
As	0.0268	Nd	
Au		Ni	0.013
B		O	
Be		P	0.005
Bi	0.153	Pb	0.429
C		Pd	
Ca		Pr	
Cd	0.0085	Pt	
Ce		Re	
Co	0.002	Rh	
Cr		Ru	
Cu	2.63	S	
Fe	0.0014	Sb	5.94
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0143	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.001)
Mo		Zr	
N			

Name MBH-73X SC7 B
Description Tin White Metals (Pewter, Babbit)
Grade
UNS

Ag	0.0059	Na	
Al	(0.001)	Nb	
As	0.059	Nd	
Au		Ni	0.016
B		O	
Be		P	
Bi	0.013	Pb	0.32
C		Pd	
Ca		Pr	
Cd	0.0019	Pt	
Ce		Re	
Co	0.0143	Rh	
Cr		Ru	
Cu	5.71	S	(0.001)
Fe	(0.043)	Sb	13.86
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0194	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0033
Mo		Zr	
N			

Name MBH-73X SC8 B ↓
Description Tin White Metals (Pewter, Babbit)
Grade
UNS

Ag	0.0253	Na	
Al	(0.001)	Nb	
As	0.11	Nd	
Au		Ni	0.0351
B		O	
Be		P	
Bi	0.0531	Pb	0.11
C		Pd	
Ca		Pr	
Cd	0.098	Pt	
Ce		Re	
Co	0.0267	Rh	
Cr		Ru	
Cu	3.78	S	0.004
Fe	0.055	Sb	5.52
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0325	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.004
Mo		Zr	
N			

Name MBH-71X PB3 A
Description Tin with Impurities
Grade
UNS

Ag	0.0011	Na	
Al		Nb	
As	0.0022	Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.0103	Pb	2.77
C		Pd	
Ca		Pr	
Cd	0.0008	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0074	S	
Fe		Sb	0.0024
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0016
Mo		Zr	
N			

Name MBH-71X PB4 A
Description Tin with Impurities
Grade
UNS

Ag	0.0047	Na	
Al		Nb	
As	0.0045	Nd	
Au		Ni	
B		O	
Be		P	
Bi	(0.002)	Pb	4
C		Pd	
Ca		Pr	
Cd	0.0027	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0014	S	
Fe		Sb	0.0059
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0063
Mo		Zr	
N			

Lead Alloys, Tin Alloys and Solders

Name MBH-71X SR0 D

Description Tin with Impurities

Grade

UNS

Ag	0.0101	Na	
Al	0.0057	Nb	
As	(0.0006)	Nd	
Au	0.0039	Ni	0.0009
B		O	
Be		P	0.0007
Bi	(0.0007)	Pb	0.038
C		Pd	
Ca		Pr	
Cd	0.002	Pt	
Ce		Re	
Co	0.0006	Rh	
Cr		Ru	
Cu	0.0049	S	(0.0047)
Fe	0.0011	Sb	0.0284
Ga	0.007	Se	
Gd		Si	
Ge	(0.0005)	Sn	
H		Sr	
Hf		Ta	
Hg	0.0083	Te	0.0019
In	0.0119	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0022
Mo		Zr	
N			

Name MBH-71X SR1 F

Description Tin with Impurities

Grade

UNS

Ag	0.0165	Na	
Al	(0.002)	Nb	
As	0.0032	Nd	
Au	0.0022	Ni	0.0058
B		O	
Be		P	0.0014
Bi	0.0102	Pb	0.0256
C		Pd	
Ca		Pr	
Cd	0.0109	Pt	
Ce		Re	
Co	0.0016	Rh	
Cr		Ru	
Cu	0.0016	S	
Fe	(0.002)	Sb	0.0203
Ga		Se	0.004
Gd		Si	
Ge	0.011	Sn	
H		Sr	
Hf		Ta	
Hg	0.0178	Te	0.001
In	0.0104	Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.0126
Mo		Zr	
N			

Section 12

Magnesium Alloys

Name MBH-61X MGP2 A ↓
Description Residuals in Pure Magnesium
Grade
UNS

Ag	0.003	Na	
Al	0.065	Nb	
As		Nd	
Au		Ni	0.0029
B		O	
Be	(<0.0001)	P	
Bi		Pb	0.0061
C		Pd	
Ca	0.0138	Pr	
Cd	0.0063	Pt	
Ce	0.0019	Re	
Co		Rh	
Cr		Ru	
Cu	0.0109	S	
Fe	0.0061	Sb	
Ga		Se	
Gd		Si	0.031
Ge		Sn	0.0073
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.0014	V	
Li		W	
Mg		Y	
Mn	0.0118	Zn	0.0122
Mo		Zr	(0.0007)
N			

Name MBH-61X MGP4 A
Description Residuals in Pure Magnesium
Grade
UNS

Ag	0.0203	Na	
Al	0.0247	Nb	
As		Nd	
Au		Ni	0.0028
B		O	
Be	(<0.0001)	P	
Bi		Pb	0.0066
C		Pd	
Ca	0.028	Pr	
Cd	0.0071	Pt	
Ce	0.0041	Re	
Co		Rh	
Cr		Ru	
Cu	0.0108	S	
Fe	(0.0044)	Sb	
Ga		Se	
Gd		Si	0.037
Ge		Sn	0.0067
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.003	V	
Li		W	
Mg		Y	
Mn	0.01	Zn	0.0158
Mo		Zr	0.03
N			

Name MBH-61X MGP5 A
Description Residuals in Pure Magnesium
Grade
UNS

Ag	0.0342	Na	
Al	0.119	Nb	
As		Nd	0.0446
Au		Ni	0.0176
B		O	
Be	0.0018	P	
Bi		Pb	0.0357
C		Pd	
Ca		Pr	
Cd	0.0292	Pt	
Ce	0.049	Re	
Co		Rh	
Cr		Ru	
Cu	0.092	S	
Fe	0.0048	Sb	
Ga		Se	
Gd		Si	0.094
Ge		Sn	0.0352
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.0382	V	
Li		W	
Mg		Y	0.0132
Mn	0.201	Zn	0.099
Mo		Zr	
N			

Name MBH-61X MGP6 A
Description Residuals in Pure Magnesium
Grade
UNS

Ag	0.0043	Na	
Al	0.0449	Nb	
As		Nd	0.0238
Au		Ni	0.0025
B		O	
Be		P	
Bi		Pb	0.012
C		Pd	
Ca	(0.001)	Pr	
Cd	0.0025	Pt	
Ce	0.0209	Re	
Co		Rh	
Cr		Ru	
Cu	0.0067	S	
Fe	0.0041	Sb	
Ga		Se	
Gd		Si	0.044
Ge		Sn	0.0091
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.0137	V	
Li		W	
Mg		Y	0.0375
Mn	0.0125	Zn	0.01
Mo		Zr	
N			

Name MBH-64X MGQ2 A
Description Magnesium-Aluminum Alloy
Grade AM50A
UNS M10500

Ag		Na	
Al	4.53	Nb	
As		Nd	
Au		Ni	0.0061
B		O	
Be	0.0013	P	
Bi		Pb	0.0107
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0151	S	
Fe	0.0041	Sb	
Ga		Se	
Gd		Si	0.051
Ge		Sn	0.0107
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.378	Zn	0.107
Mo		Zr	
N			

Magnesium Alloys

Name MBH-64X MGQ5 A
Description Magnesium-Aluminum Alloy
Grade AM60B
UNS M10602

Name MBH-64X MGQ3 A
Description Magnesium-Aluminum Alloy
Grade AM90A
UNS M10900

Name MBH-64X MGQ6 A
Description Magnesium-Aluminum Alloy
Grade AS21A
UNS M10210

Name MBH-64X MGQ9 A
Description Magnesium-Aluminum Alloy
Grade AS21B
UNS M10212

Name MBH-64X MGQ7 A
Description Magnesium-Aluminum Alloy
Grade AS41A
UNS M10410

Ag		Na	
Al	5.76	Nb	
As		Nd	
Au		Ni	0.001
B		O	
Be	0.0013	P	
Bi		Pb	0.0056
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0072	S	
Fe	0.0043	Sb	
Ga		Se	
Gd		Si	0.052
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.276	Zn	0.0465
Mo		Zr	
N			

Ag		Na	
Al	8.66	Nb	
As		Nd	
Au		Ni	0.0032
B		O	
Be	0.0041	P	
Bi		Pb	0.0022
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0349	S	
Fe	0.009	Sb	
Ga		Se	
Gd		Si	0.083
Ge		Sn	0.0019
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.206	Zn	0.0039
Mo		Zr	
N			

Ag		Na	
Al	2.31	Nb	
As		Nd	
Au		Ni	0.0026
B		O	
Be	0.0007	P	
Bi		Pb	0.006
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0045	S	
Fe	(0.004)	Sb	
Ga		Se	
Gd		Si	(0.97)
Ge		Sn	0.0055
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.26)	Zn	0.072
Mo		Zr	
N			

Ag		Na	
Al	2.14	Nb	
As		Nd	0.114
Au		Ni	0.002
B		O	
Be	0.0015	P	
Bi		Pb	0.0096
C		Pd	
Ca		Pr	
Cd		Pt	
Ce	0.111	Re	
Co		Rh	
Cr		Ru	
Cu	0.0104	S	
Fe	0.0069	Sb	
Ga		Se	
Gd		Si	(0.37)
Ge		Sn	0.0076
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.083	V	
Li		W	
Mg		Y	
Mn	0.0684	Zn	0.243
Mo		Zr	
N			

Ag		Na	
Al	4.02	Nb	
As		Nd	
Au		Ni	0.0053
B		O	
Be	0.00042	P	
Bi		Pb	0.0126
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0167	S	
Fe	0.0028	Sb	
Ga		Se	
Gd		Si	(1.05)
Ge		Sn	0.0096
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(0.43)	Zn	0.061
Mo		Zr	
N			

Magnesium Alloys

Name	MBH-64X MQQ1 A		
Description	Magnesium-Aluminum Alloy		
Grade	AZ10A		
UNS	M11100		

Name	MBH-64X MQQ8 A		
Description	Magnesium-Aluminum Alloy		
Grade	AZ10-Mod		
UNS	M11100*		

Name	MBH-65X MGA21 A		
Description	Magnesium-Aluminum Alloy		
Grade	AZ125A		
UNS	M11125		

Name	MBH-65X MGA20 A		
Description	Magnesium-Aluminum Alloy		
Grade	AZ61A		
UNS	M11610		

Name	MBH-65X MGA22 A		
Description	Magnesium-Aluminum Alloy		
Grade	AZ91A		
UNS	M11910		

Ag		Na	
Al	1.083	Nb	
As		Nd	
Au		Ni	0.0041
B		O	
Be	0.00036	P	
Bi		Pb	0.0199
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.084	S	
Fe	0.0034	Sb	
Ga		Se	
Gd		Si	0.062
Ge		Sn	0.0195
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.377	Zn	0.235
Mo		Zr	
N			

Ag		Na	
Al	1.03	Nb	
As		Nd	
Au		Ni	0.0004
B		O	
Be	0.00015	P	
Bi		Pb	0.0008
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0019	S	
Fe	0.0018	Sb	
Ga		Se	
Gd		Si	0.045
Ge		Sn	0.0022
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.7	Zn	0.0442
Mo		Zr	
N			

Ag		Na	
Al	12.37	Nb	
As		Nd	
Au		Ni	0.001
B		O	
Be	0.0006	P	
Bi		Pb	0.0048
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.002	S	
Fe	0.014	Sb	
Ga		Se	
Gd		Si	0.028
Ge		Sn	0.0063
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0777	Zn	5.11
Mo		Zr	
N			

Ag		Na	
Al	5.87	Nb	
As		Nd	
Au		Ni	0.0025
B		O	
Be	0.0018	P	
Bi		Pb	0.0075
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0131	S	
Fe	0.0078	Sb	
Ga		Se	
Gd		Si	0.052
Ge		Sn	0.032
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.067	Zn	1.32
Mo		Zr	
N			

Ag		Na	
Al	8.62	Nb	
As		Nd	
Au		Ni	0.0058
B		O	
Be	0.0006	P	
Bi		Pb	0.0038
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.078	S	
Fe	0.006	Sb	
Ga		Se	
Gd		Si	0.085
Ge		Sn	0.0033
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.4	Zn	0.89
Mo		Zr	
N			

Magnesium Alloys

Name MBH-65X MGA19 A
Description Magnesium-Aluminum Alloy
Grade AZ92A
UNS M11920

Name MBH-65X MGA1 J ++
Description Magnesium-Aluminum Alloy
Grade
UNS

Name MBH-65X MGA11 B ↓
Description Magnesium-Aluminum Alloy
Grade
UNS

Name MBH-65X MGA12 A
Description Magnesium-Aluminum Alloy
Grade
UNS

Name MBH-65X MGA13 A
Description Magnesium-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	8.97	Nb	
As		Nd	
Au		Ni	0.0065
B		O	
Be	0.00025	P	
Bi		Pb	0.0489
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0426	S	
Fe	0.0085	Sb	
Ga		Se	
Gd		Si	0.196
Ge		Sn	0.0489
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.322	Zn	2.17
Mo		Zr	
N			

Ag	0.012	Na	
Al	5.45	Nb	
As		Nd	
Au		Ni	0.021
B		O	
Be	0.006	P	
Bi		Pb	0.012
C		Pd	
Ca	0.029	Pr	
Cd	0.013	Pt	
Ce	0.009	Re	
Co		Rh	
Cr		Ru	
Cu	0.221	S	
Fe	0.021	Sb	
Ga		Se	
Gd		Si	0.2
Ge		Sn	0.072
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.007	V	
Li		W	
Mg		Y	
Mn	0.06	Zn	1.26
Mo		Zr	
N			

Ag	(0.0002)	Na	
Al	3.63	Nb	
As		Nd	
Au		Ni	0.0134
B		O	
Be	0.0022	P	
Bi		Pb	0.0183
C		Pd	
Ca	(0.09)	Pr	
Cd	0.0014	Pt	
Ce	(0.0005)	Re	
Co		Rh	
Cr		Ru	
Cu	0.0496	S	
Fe	0.0048	Sb	
Ga		Se	
Gd		Si	(0.024)
Ge		Sn	0.093
H		Sr	
Hf		Ta	
Hg	0.006	Te	
In		Ti	
Ir		Tl	
La	(0.0005)	V	
Li		W	
Mg		Y	
Mn	0.047	Zn	1.59
Mo		Zr	
N			

Ag	0.0128	Na	
Al	5.68	Nb	
As		Nd	
Au		Ni	0.0148
B		O	
Be	(0.0036)	P	
Bi		Pb	0.01
C		Pd	
Ca	0.037	Pr	
Cd	0.0121	Pt	
Ce	0.0009	Re	
Co		Rh	
Cr		Ru	
Cu	0.266	S	
Fe	0.0053	Sb	
Ga		Se	
Gd		Si	0.0142
Ge		Sn	0.0021
H		Sr	
Hf		Ta	
Hg	(0.016)	Te	
In		Ti	
Ir		Tl	
La	0.0007	V	
Li		W	
Mg		Y	
Mn	0.198	Zn	3.18
Mo		Zr	
N			

Ag	0.0074	Na	
Al	7.45	Nb	
As		Nd	
Au		Ni	0.0039
B		O	
Be	(0.01)	P	
Bi		Pb	0.0085
C		Pd	
Ca	0.0064	Pr	
Cd	0.0055	Pt	
Ce	0.0024	Re	
Co		Rh	
Cr		Ru	
Cu	0.125	S	
Fe	(0.008)	Sb	
Ga		Se	
Gd		Si	0.022
Ge		Sn	0.043
H		Sr	
Hf		Ta	
Hg	(0.033)	Te	
In		Ti	
Ir		Tl	
La	0.0021	V	
Li		W	
Mg		Y	
Mn	0.092	Zn	0.925
Mo		Zr	
N			

Magnesium Alloys

Name MBH-65X MGA14 B ↓
Description Magnesium-Aluminum Alloy
Grade
UNS

Ag	0.0016	Na	
Al	9.09	Nb	
As		Nd	
Au		Ni	0.0082
B		O	
Be	0.0029	P	
Bi		Pb	0.0061
C		Pd	
Ca		Pr	
Cd	0.0014	Pt	
Ce	0.012	Re	
Co		Rh	
Cr		Ru	
Cu	0.0102	S	
Fe	0.0084	Sb	
Ga		Se	
Gd		Si	0.08
Ge		Sn	0.0085
H		Sr	
Hf		Ta	
Hg	(0.08)	Te	
In		Ti	
Ir		Tl	
La	0.0111	V	
Li		W	
Mg		Y	
Mn	0.282	Zn	0.685
Mo		Zr	
N			

Name MBH-65X MGA15 A
Description Magnesium-Aluminum Alloy
Grade
UNS

Ag	0.03	Na	
Al	10.67	Nb	
As		Nd	
Au		Ni	0.0026
B		O	
Be	0.0062	P	
Bi		Pb	0.0051
C		Pd	
Ca	(0.0014)	Pr	
Cd	0.0034	Pt	
Ce	0.0069	Re	
Co		Rh	
Cr		Ru	
Cu	0.0273	S	
Fe	0.01	Sb	
Ga		Se	
Gd		Si	0.034
Ge		Sn	0.0021
H		Sr	
Hf		Ta	
Hg	0.011	Te	
In		Ti	
Ir		Tl	
La	0.0048	V	
Li		W	
Mg		Y	
Mn	0.067	Zn	0.348
Mo		Zr	
N			

Name MBH-65X MGA16 A
Description Magnesium-Aluminum Alloy
Grade
UNS

Ag	0.0035	Na	
Al	6.78	Nb	
As		Nd	
Au		Ni	0.0057
B		O	
Be	0.0011	P	
Bi		Pb	0.05
C		Pd	
Ca	0.0024	Pr	
Cd	0.0066	Pt	
Ce	0.0017	Re	
Co		Rh	
Cr		Ru	
Cu	0.099	S	
Fe	0.0073	Sb	
Ga		Se	
Gd		Si	0.023
Ge		Sn	0.028
H		Sr	
Hf		Ta	
Hg	0.005	Te	
In		Ti	
Ir		Tl	
La	0.0012	V	
Li		W	
Mg		Y	
Mn	0.271	Zn	4.03
Mo		Zr	
N			

Name MBH-65X MGB1 E
Description Magnesium-Aluminum Alloy
Grade
UNS

Ag	0.03	Na	
Al	1.9	Nb	
As		Nd	
Au		Ni	0.002
B		O	
Be	0.0008	P	
Bi		Pb	0.0095
C		Pd	
Ca	(0.067)	Pr	
Cd	0.076	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.051	S	
Fe	0.0027	Sb	
Ga		Se	
Gd		Si	0.069
Ge		Sn	0.0098
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.77	Zn	1.6
Mo		Zr	
N			

Name MBH-65X MGB2 C
Description Magnesium-Aluminum Alloy
Grade
UNS

Ag	0.0099	Na	
Al	2.67	Nb	
As		Nd	
Au		Ni	0.0028
B		O	
Be	0.0008	P	
Bi		Pb	0.0036
C		Pd	
Ca	0.011	Pr	
Cd	0.0115	Pt	
Ce	0.0009	Re	
Co		Rh	
Cr		Ru	
Cu	0.113	S	
Fe	0.01	Sb	
Ga		Se	
Gd		Si	0.069
Ge		Sn	0.0047
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0003
Ir		Tl	
La	0.0007	V	
Li		W	
Mg		Y	
Mn	0.333	Zn	0.95
Mo		Zr	
N			

Magnesium Alloys

Name MBH-65X MGB2 D
Description Magnesium-Aluminum Alloy
Grade
UNS

Name MBH-65X MGB3 B
Description Magnesium-Aluminum Alloy
Grade
UNS

Name MBH-65X MGB3 C
Description Magnesium-Aluminum Alloy
Grade
UNS

Name MBH-67X MGK2 A
Description Magnesium-Aluminum Alloy
Grade
UNS

Name MBH-67X MGK3 A
Description Magnesium-Aluminum Alloy
Grade
UNS

Ag	0.0099	Na	
Al	2.81	Nb	
As		Nd	
Au		Ni	0.0043
B		O	
Be	0.0014	P	
Bi		Pb	0.0053
C		Pd	
Ca	(0.01)	Pr	
Cd	0.0103	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.065	S	
Fe	0.0032	Sb	
Ga		Se	
Gd		Si	(0.088)
Ge		Sn	0.0052
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.526	Zn	1.047
Mo		Zr	
N			

Ag	(0.002)	Na	
Al	3.19	Nb	
As		Nd	
Au		Ni	0.002
B		O	
Be	0.0029	P	
Bi		Pb	0.0037
C		Pd	
Ca	0.03	Pr	
Cd	0.012	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0214	S	
Fe	(0.005)	Sb	
Ga		Se	
Gd		Si	0.012
Ge		Sn	0.005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.003)
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0122	Zn	0.608
Mo		Zr	
N			

Ag	0.0028	Na	
Al	3.38	Nb	
As		Nd	
Au		Ni	0.0027
B		O	
Be	0.0019	P	
Bi		Pb	0.0023
C		Pd	
Ca	(0.003)	Pr	
Cd	0.0025	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0222	S	
Fe	0.0028	Sb	
Ga		Se	
Gd		Si	0.042
Ge		Sn	0.0017
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.277	Zn	0.711
Mo		Zr	
N			

Ag		Na	
Al	3.84	Nb	
As		Nd	0.125
Au		Ni	0.0033
B		O	
Be	0.0025	P	
Bi		Pb	
C		Pd	
Ca		Pr	0.053
Cd		Pt	
Ce	0.7	Re	
Co		Rh	
Cr		Ru	
Cu	0.0041	S	
Fe	0.0016	Sb	
Ga		Se	
Gd	0.053	Si	0.057
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.34	V	
Li		W	
Mg		Y	
Mn	0.534	Zn	0.132
Mo		Zr	
N			

Ag		Na	
Al	4.56	Nb	
As		Nd	0.175
Au		Ni	0.0016
B		O	
Be	0.0007	P	
Bi		Pb	
C		Pd	
Ca		Pr	0.069
Cd		Pt	
Ce	0.83	Re	
Co		Rh	
Cr		Ru	
Cu	0.0017	S	
Fe	0.0024	Sb	
Ga		Se	
Gd	0.038	Si	0.068
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.374	V	
Li		W	
Mg		Y	
Mn	0.516	Zn	0.05
Mo		Zr	
N			

Magnesium Alloys

Name MBH-63X MGE1 E
Description Magnesium-Manganese Alloy
Grade
UNS

Ag	0.0195	Na	
Al	(0.088)	Nb	
As		Nd	
Au		Ni	0.0162
B		O	
Be	(0.0002)	P	
Bi		Pb	0.011
C		Pd	
Ca		Pr	
Cd	0.0017	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0503	S	
Fe	0.0014	Sb	
Ga		Se	
Gd		Si	0.052
Ge		Sn	0.0053
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.86	Zn	0.083
Mo		Zr	
N			

Name MBH-63X MGE2 B
Description Magnesium-Manganese Alloy
Grade
UNS

Ag	0.009	Na	
Al	0.0432	Nb	
As		Nd	
Au		Ni	0.0035
B		O	
Be		P	
Bi		Pb	0.002
C		Pd	
Ca	0.0015	Pr	
Cd	0.0009	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0203	S	
Fe	0.002	Sb	
Ga		Se	
Gd		Si	0.019
Ge		Sn	0.0024
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.75	Zn	0.0245
Mo		Zr	
N			

Name MBH-63X MGE3 C
Description Magnesium-Manganese Alloy
Grade
UNS

Ag	0.0041	Na	
Al	(0.056)	Nb	
As		Nd	
Au		Ni	0.0028
B		O	
Be	<0.0001	P	
Bi		Pb	0.0046
C		Pd	
Ca		Pr	
Cd	0.0046	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0072	S	
Fe	0.0005	Sb	
Ga		Se	
Gd		Si	0.014
Ge		Sn	0.006
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.62	Zn	0.0101
Mo		Zr	
N			

Name MBH-66X MGC4 C
Description Magnesium-Zinc Alloy
Grade
UNS

Ag	0.0074	Na	
Al	0.039	Nb	
As		Nd	
Au		Ni	0.0009
B		O	
Be	(0.0001)	P	
Bi		Pb	0.003
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0024	S	
Fe	0.006	Sb	
Ga		Se	
Gd		Si	0.06
Ge		Sn	0.021
H		Sr	(0.0001)
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.166	Zn	6.81
Mo		Zr	(<0.001)
N			

Name MBH-66X MGC5 A
Description Magnesium-Zinc Alloy
Grade
UNS

Ag		Na	
Al	0.072	Nb	
As		Nd	
Au		Ni	0.0111
B		O	
Be		P	
Bi		Pb	0.0281
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0286	S	
Fe	0.0008	Sb	
Ga		Se	
Gd		Si	0.026
Ge		Sn	0.0051
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	1.17	Zn	6.61
Mo		Zr	
N			

Magnesium Alloys

Name MBH-66X MGD1 B
Description Magnesium-Zinc Alloy
Grade
UNS

Name MBH-66X MGD5 A
Description Magnesium-Zinc Alloy
Grade
UNS

Ag		Na	
Al	0.147	Nb	
As		Nd	0.064
Au		Ni	0.0162
B		O	
Be		P	
Bi		Pb	0.026
C		Pd	
Ca		Pr	
Cd		Pt	
Ce	0.065	Re	
Co		Rh	
Cr		Ru	
Cu	0.066	S	
Fe	0.0029	Sb	
Ga		Se	
Gd		Si	(0.073)
Ge		Sn	0.026
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.031	V	
Li		W	
Mg		Y	
Mn	0.125	Zn	1.19
Mo		Zr	
N			

Ag	0.044	Na	
Al	0.04	Nb	
As		Nd	
Au		Ni	0.012
B		O	
Be	(<0.0005)	P	
Bi		Pb	0.097
C		Pd	
Ca	(0.03)	Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	2.88	S	
Fe	0.008	Sb	
Ga		Se	
Gd		Si	0.134
Ge		Sn	0.104
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.307	Zn	6.25
Mo		Zr	
N			

Section 13

Silver Alloys

Name MBH-131X AGP2 B
Description Silver with Impurities
Grade
UNS
Form Rolled
CRM

Name MBH-131X AGP3 B
Description Silver with Impurities
Grade
UNS
Form Rolled
CRM

Name MBH-131X AGP4 B
Description Silver with Impurities
Grade
UNS
Form Rolled
CRM

Name MBH-131X PAg1 A
Description Silver with Impurities
Grade
UNS
Form concast
CRM

Name MBH-131X PAg2 A
Description Silver with Impurities
Grade
UNS
Form concast
CRM

Ag		Na	
Al		Nb	
As	0.0029	Nd	
Au	0.0114	Ni	0.0057
B		O	
Be		P	
Bi	0.0096	Pb	0.0075
C		Pd	0.0105
Ca		Pr	
Cd	0.0056	Pt	0.0112
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0193	S	
Fe	(0.002)	Sb	0.0107
Ga		Se	0.0065
Gd		Si	
Ge		Sn	0.0095
H		Sr	
Hf		Ta	
Hg		Te	0.009
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0049	Zn	0.0109
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As	0.0006	Nd	
Au	0.0026	Ni	0.0012
B		O	
Be		P	
Bi	0.0012	Pb	0.0012
C		Pd	0.0016
Ca		Pr	
Cd	0.0006	Pt	0.0023
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0066	S	
Fe	(0.0011)	Sb	0.0021
Ga		Se	0.0016
Gd		Si	
Ge		Sn	0.0022
H		Sr	
Hf		Ta	
Hg		Te	0.0018
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0003	Zn	0.0034
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As	0.0003	Nd	
Au	0.0009	Ni	0.0006
B		O	
Be		P	
Bi	0.0007	Pb	0.0005
C		Pd	0.0007
Ca		Pr	
Cd	0.0002	Pt	0.0007
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0041	S	
Fe	(0.0023)	Sb	0.0012
Ga		Se	0.0006
Gd		Si	
Ge		Sn	0.0006
H		Sr	
Hf		Ta	
Hg		Te	0.0005
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0003	Zn	0.002
Mo		Zr	
N			

Ag		Na	
Al	0.0008	Nb	
As	0.0012	Nd	
Au	0.012	Ni	0.0025
B		O	
Be		P	
Bi	0.004	Pb	0.004
C		Pd	0.018
Ca		Pr	
Cd	0.0035	Pt	0.0035
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0075	S	
Fe	0.0005	Sb	0.005
Ga	0.006	Se	0.0035
Gd		Si	0.003
Ge		Sn	0.004
H		Sr	
Hf		Ta	
Hg		Te	0.012
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0035	Zn	0.005
Mo		Zr	
N			

Ag		Na	
Al	0.0002	Nb	
As	0.0008	Nd	
Au	0.002	Ni	0.0009
B		O	
Be		P	
Bi	0.0012	Pb	0.0012
C		Pd	0.018
Ca		Pr	
Cd	0.0005	Pt	0.001
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.04	S	
Fe	0.0007	Sb	0.0012
Ga	0.0015	Se	0.001
Gd		Si	0.0004
Ge		Sn	0.001
H		Sr	
Hf		Ta	
Hg		Te	0.0015
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.001	Zn	0.004
Mo		Zr	
N			

Silver Alloys

Name MBH-132X AGB85 C
Description Silver-Copper Alloy
Grade
UNS
Form Cast
CRM

Name MBH-133X AGQ2 C
Description Silver-Copper Alloy
Grade
UNS
Form Cast
CRM

Name MBH-133X AGQ3 C ↓
Description Silver-Copper Alloy
Grade
UNS
Form Rolled
CRM

Ag	84.87	Na
Al		Nb
As		Nd
Au		Ni
B		O
Be		P
Bi		Pb
C		Pd
Ca		Pr
Cd		Pt
Ce		Re
Co		Rh
Cr		Ru
Cu	15.09	S
Fe		Sb
Ga		Se
Gd		Si
Ge		Sn
H		Sr
Hf		Ta
Hg		Te
In		Ti
Ir		Tl
La		V
Li		W
Mg		Y
Mn		Zn
Mo		Zr
N		

Ag		Na
Al		Nb
As		Nd
Au	0.978	Ni
B		O
Be		P
Bi		Pb 0.469
C		Pd
Ca		Pr
Cd		Pt
Ce		Re
Co		Rh
Cr		Ru
Cu	5.808	S
Fe		Sb
Ga		Se
Gd		Si
Ge		Sn
H		Sr
Hf		Ta
Hg		Te
In		Ti
Ir		Tl
La		V
Li		W
Mg		Y
Mn		Zn
Mo		Zr
N		

Ag		Na
Al		Nb
As		Nd
Au	1.975	Ni
B		O
Be		P
Bi		Pb 0.921
C		Pd
Ca		Pr
Cd		Pt
Ce		Re
Co		Rh
Cr		Ru
Cu	9.612	S
Fe		Sb
Ga		Se
Gd		Si
Ge		Sn
H		Sr
Hf		Ta
Hg		Te
In		Ti
Ir		Tl
La		V
Li		W
Mg		Y
Mn		Zn
Mo		Zr
N		

Section 14

Titanium Alloys

Name	IARM-312B ↓
Description	Commercially Pure Titanium
Grade	Grade 1
UNS	R50250

Name	IARM-311A ↓
Description	Commercially Pure Titanium
Grade	Grade 2
UNS	R50400

Name	IARM-303B
Description	Commercially Pure Titanium
Grade	Ti Grade 7
UNS	R52400

Name	IARM-361A
Description	Commercially Pure Titanium
Grade	Ti Grade 12
UNS	R53400

Name	IARM-271B
Description	Titanium Alpha Alloy
Grade	Grade 6 (5-2.5)
UNS	R54520

Ag		Na	
Al	0.018	Nb	(0.001)
As		Nd	
Au		Ni	0.019
B	(<0.001)	O	0.128
Be		P	(<0.002)
Bi		Pb	
C	0.0092	Pd	(<0.005)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.002)	Rh	
Cr	0.01	Ru	(<0.001)
Cu	0.003	S	(0.0008)
Fe	0.072	Sb	(0.0003)
Ga		Se	
Gd		Si	0.006
Ge		Sn	0.004
H	0.0004	Sr	
Hf	(0.0004)	Ta	(<0.005)
Hg		Te	
In		Ti	(99.7)
Ir		Tl	
La		V	0.009
Li		W	(<0.005)
Mg	(<0.002)	Y	(<0.001)
Mn	(0.001)	Zn	
Mo	0.003	Zr	0.0014
N	0.007		

Ag		Na	
Al	0.32	Nb	(0.002)
As		Nd	
Au		Ni	0.014
B		O	0.083
Be		P	
Bi		Pb	
C	0.009	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.013	Ru	
Cu	0.0013	S	
Fe	0.06	Sb	
Ga		Se	
Gd		Si	0.005
Ge		Sn	0.002
H	0.0021	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(99.4)
Ir		Tl	
La		V	0.004
Li		W	(0.002)
Mg		Y	(0.0002)
Mn	0.0013	Zn	
Mo	0.0012	Zr	0.012
N	0.012		

Ag		Na	
Al	0.015	Nb	0.006
As		Nd	
Au		Ni	0.0013
B	(<0.001)	O	0.176
Be		P	(<0.002)
Bi		Pb	
C	0.035	Pd	0.13
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.002)	Rh	
Cr	0.0018	Ru	(<0.01)
Cu	0.002	S	(<0.002)
Fe	0.12	Sb	
Ga		Se	
Gd		Si	0.006
Ge		Sn	0.006
H	0.0008	Sr	
Hf	(<0.003)	Ta	(<0.005)
Hg		Te	
In		Ti	(99.6)
Ir		Tl	
La		V	0.0023
Li		W	(<0.002)
Mg	(<0.001)	Y	(<0.001)
Mn	0.001	Zn	
Mo	0.002	Zr	0.0028
N	0.017		

Ag		Na	
Al	0.013	Nb	(0.004)
As		Nd	
Au		Ni	0.88
B	(0.0005)	O	0.15
Be		P	(<0.003)
Bi		Pb	
C	0.012	Pd	(0.002)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.002)	Rh	
Cr	0.008	Ru	(<0.006)
Cu	0.003	S	(<0.004)
Fe	0.095	Sb	
Ga		Se	
Gd		Si	0.012
Ge		Sn	0.004
H	0.0027	Sr	
Hf	(<0.004)	Ta	(<0.005)
Hg		Te	
In		Ti	(98.5)
Ir		Tl	
La		V	0.006
Li		W	(<0.03)
Mg	(<0.002)	Y	(0.0004)
Mn	(<0.05)	Zn	
Mo	0.288	Zr	0.0016
N	0.006		

Ag		Na	
Al	5.21	Nb	0.005
As		Nd	
Au		Ni	0.0089
B	0.0012	O	0.155
Be		P	(0.0011)
Bi		Pb	
C	0.0128	Pd	(0.0011)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	0.01	Ru	(0.003)
Cu	0.0068	S	(0.001)
Fe	0.196	Sb	
Ga		Se	
Gd		Si	0.01
Ge		Sn	2.52
H	0.0139	Sr	
Hf		Ta	(0.0104)
Hg		Te	
In		Ti	(91.9)
Ir		Tl	
La		V	0.057
Li		W	(0.0021)
Mg	(0.001)	Y	(0.00018)
Mn	0.0036	Zn	
Mo	0.0063	Zr	0.059
N	0.013		

Titanium Alloys

Name	IARM-Ti64ELI-18
Description	Titanium Alpha-Beta Alloy
Grade	Grade 23 (6-4 ELI)
UNS	R56407

Name	IARM-Ti425I5-18
Description	Titanium Alpha-Beta Alloy
Grade	Grade 38 (4-2.5-1.5)
UNS	R54250

Name	IARM-Ti64-18
Description	Titanium Alpha-Beta Alloy
Grade	Grade 5 (6-4)
UNS	R56400

Name	IARM-261B
Description	Titanium Alpha-Beta Alloy
Grade	Grade 9 (3-2.5)
UNS	R56320

Name	IARM-261C
Description	Titanium Alpha-Beta Alloy
Grade	Grade 9 (3-2.5)
UNS	R56320

Ag		Na	
Al	6.11	Nb	(0.003)
As	(<0.005)	Nd	
Au		Ni	0.003
B	(<0.01)	O	0.118
Be		P	(<0.005)
Bi	(<0.005)	Pb	(<0.01)
C	0.033	Pd	
Ca	(<0.005)	Pr	
Cd		Pt	
Ce		Re	
Co	(<0.0002)	Rh	
Cr	0.004	Ru	
Cu	0.002	S	(0.0005)
Fe	0.167	Sb	(0.001)
Ga		Se	
Gd		Si	0.014
Ge		Sn	0.022
H	0.0021	Sr	
Hf	(<0.01)	Ta	(<0.01)
Hg		Te	
In		Ti	
Ir		Tl	
La		V	4.01
Li		W	(0.0005)
Mg	(<0.01)	Y	(<0.01)
Mn	0.0014	Zn	(<0.01)
Mo	(0.002)	Zr	(0.002)
N	0.006		

Ag		Na	
Al	3.99	Nb	0.0016
As	(<0.005)	Nd	
Au		Ni	0.009
B	(<0.001)	O	0.25
Be		P	(<0.005)
Bi	(<0.001)	Pb	(<0.001)
C	0.0067	Pd	(<0.008)
Ca	(<0.005)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	(0.002)	Rh	
Cr	0.015	Ru	
Cu	0.0022	S	(<0.003)
Fe	1.58	Sb	(<0.001)
Ga		Se	(<0.005)
Gd		Si	0.011
Ge		Sn	0.004
H	0.0018	Sr	
Hf	(<0.001)	Ta	(<0.001)
Hg		Te	
In		Ti	(91.6)
Ir		Tl	
La		V	2.53
Li		W	(<0.003)
Mg	(<0.004)	Y	(<0.003)
Mn	0.006	Zn	(<0.001)
Mo	0.0014	Zr	0.0019
N	0.0026		

Ag	(<0.005)	Na	
Al	6.52	Nb	(0.004)
As	(<0.01)	Nd	
Au		Ni	0.011
B		O	0.181
Be		P	(<0.005)
Bi	(<0.005)	Pb	(<0.01)
C	0.034	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.001)	Pt	
Ce		Re	
Co	(0.0004)	Rh	
Cr	0.013	Ru	(<0.01)
Cu	(0.002)	S	(<0.001)
Fe	0.19	Sb	(<0.02)
Ga		Se	
Gd		Si	0.011
Ge		Sn	0.003
H	0.0031	Sr	
Hf	(<0.01)	Ta	(0.0002)
Hg		Te	
In		Ti	
Ir		Tl	
La		V	4.08
Li		W	(0.0002)
Mg	(<0.01)	Y	(<0.005)
Mn	(0.001)	Zn	(<0.01)
Mo	0.004	Zr	(<0.01)
N	0.025		

Ag		Na	
Al	2.98	Nb	(0.002)
As		Nd	
Au		Ni	0.023
B	0.0004	O	0.083
Be		P	(0.004)
Bi		Pb	
C	0.011	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.004)	Rh	
Cr	0.016	Ru	(0.001)
Cu	0.003	S	(0.0004)
Fe	0.19	Sb	
Ga		Se	
Gd		Si	0.008
Ge		Sn	0.004
H	(0.001)	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(94.4)
Ir		Tl	
La		V	2.23
Li		W	(0.003)
Mg		Y	(0.0004)
Mn	(0.003)	Zn	
Mo	0.004	Zr	0.002
N	0.004		

Ag		Na	
Al	3.05	Nb	(0.003)
As		Nd	
Au		Ni	0.016
B	0.0004	O	0.085
Be		P	(0.003)
Bi		Pb	
C	0.011	Pd	(0.002)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.005)	Rh	
Cr	0.014	Ru	(0.001)
Cu	0.003	S	(0.001)
Fe	0.18	Sb	
Ga		Se	
Gd		Si	0.007
Ge		Sn	0.006
H	0.001	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(94.1)
Ir		Tl	
La		V	2.46
Li		W	(0.001)
Mg		Y	(0.0004)
Mn	(0.003)	Zn	
Mo	0.004	Zr	0.003
N	0.005		

Titanium Alloys

Name	IARM-261D
Description	Titanium Alpha-Beta Alloy
Grade	Grade 9 (3-2.5)
UNS	R56320

Name	IARM-261E
Description	Titanium Alpha-Beta Alloy
Grade	Grade 9 (3-2.5)
UNS	R56320

Name	IARM-280A
Description	Titanium Alpha-Beta Alloy
Grade	Ti 4-4-2
UNS	

Name	IARM-345A
Description	Titanium Alpha-Beta Alloy
Grade	Ti 5-2-2-4-4
UNS	R58650

Name	IARM-336A
Description	Titanium Alpha-Beta Alloy
Grade	Ti 6-2-4-6
UNS	R56260

Ag		Na	
Al	3.02	Nb	(0.003)
As		Nd	
Au		Ni	0.018
B	0.0003	O	0.083
Be		P	(<0.004)
Bi		Pb	
C	0.011	Pd	(0.002)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.001)	Rh	
Cr	0.016	Ru	(0.0005)
Cu	0.0028	S	(0.001)
Fe	0.185	Sb	
Ga		Se	
Gd		Si	0.008
Ge		Sn	0.005
H	(0.0005)	Sr	
Hf		Ta	(0.0005)
Hg		Te	
In		Ti	(94.2)
Ir		Tl	
La		V	2.5
Li		W	(0.001)
Mg		Y	(0.0005)
Mn	(0.002)	Zn	
Mo	0.003	Zr	0.003
N	0.0051		

Ag		Na	
Al	3.05	Nb	(0.005)
As		Nd	
Au		Ni	0.018
B	0.0003	O	0.084
Be		P	(<0.003)
Bi		Pb	
C	0.012	Pd	(0.002)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.0004)	Rh	
Cr	0.016	Ru	(0.001)
Cu	0.0025	S	(0.001)
Fe	0.18	Sb	
Ga		Se	
Gd		Si	0.007
Ge		Sn	0.005
H	(0.0005)	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(94.1)
Ir		Tl	
La		V	2.51
Li		W	(0.001)
Mg		Y	(0.001)
Mn	(0.001)	Zn	
Mo	0.003	Zr	(0.003)
N	0.006		

Ag		Na	
Al	4.11	Nb	(0.001)
As		Nd	
Au		Ni	0.012
B		O	0.19
Be		P	
Bi		Pb	
C	0.005	Pd	(0.002)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.002)	Rh	
Cr	0.0055	Ru	
Cu	0.003	S	(0.001)
Fe	0.044	Sb	
Ga		Se	
Gd		Si	0.47
Ge		Sn	2.07
H	0.0015	Sr	
Hf		Ta	
Hg		Te	
In		Ti	(88.7)
Ir		Tl	
La		V	0.023
Li		W	
Mg		Y	(0.0003)
Mn	(0.002)	Zn	
Mo	4.01	Zr	0.002
N	0.0014		

Ag		Na	
Al	5.12	Nb	(0.002)
As		Nd	
Au		Ni	0.015
B	(0.001)	O	0.12
Be		P	(0.002)
Bi		Pb	
C	0.01	Pd	(0.002)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.002)	Rh	
Cr	3.89	Ru	
Cu	0.002	S	(0.001)
Fe	0.121	Sb	
Ga		Se	
Gd		Si	0.013
Ge		Sn	1.99
H	0.004	Sr	
Hf		Ta	(0.003)
Hg		Te	
In		Ti	(82.8)
Ir		Tl	
La		V	0.005
Li		W	(0.002)
Mg		Y	0.0003
Mn	0.0009	Zn	
Mo	4.09	Zr	1.9
N	0.0025		

Ag		Na	
Al	5.9	Nb	
As		Nd	
Au		Ni	0.002
B	(0.001)	O	0.102
Be		P	
Bi		Pb	
C	0.005	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.002	Rh	
Cr	0.002	Ru	
Cu	0.002	S	(0.002)
Fe	0.115	Sb	
Ga		Se	
Gd		Si	0.019
Ge		Sn	2.03
H	0.0022	Sr	
Hf		Ta	
Hg		Te	
In		Ti	81.7
Ir		Tl	
La		V	0.005
Li		W	(0.004)
Mg		Y	(0.0003)
Mn		Zn	
Mo	6.16	Zr	3.92
N	0.0015		

Titanium Alloys

Name	IARM-Ti662-18
Description	Titanium Alpha-Beta Alloy
Grade	Ti 6-6-2
UNS	R56620

Name	IARM-300A
Description	Titanium Alpha-Beta Alloy
Grade	Ti 6-7
UNS	R56700

Name	IARM-300B
Description	Titanium Alpha-Beta Alloy
Grade	Ti 6-7
UNS	R56700

Name	IARM-300C
Description	Titanium Alpha-Beta Alloy
Grade	Ti 6-7
UNS	R56700

Name	IARM-300D
Description	Titanium Alpha-Beta Alloy
Grade	Ti 6-7
UNS	R56700

Ag		Na	
Al	5.61	Nb	
As		Nd	
Au		Ni	0.039
B		O	0.19
Be		P	
Bi		Pb	
C	0.007	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.046	Ru	
Cu	0.46	S	
Fe	0.51	Sb	
Ga		Se	
Gd		Si	0.011
Ge		Sn	2.01
H	0.0089	Sr	
Hf		Ta	
Hg		Te	
In		Ti	85.8
Ir		Tl	
La		V	5.35
Li		W	
Mg		Y	
Mn	0.005	Zn	
Mo	0.0031	Zr	0.0011
N	0.021		

Ag		Na	
Al	5.96	Nb	6.86
As		Nd	
Au		Ni	0.0081
B	(0.0008)	O	0.162
Be		P	(0.001)
Bi		Pb	
C	0.007	Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	0.0097	Ru	
Cu	0.0039	S	
Fe	0.191	Sb	
Ga		Se	
Gd		Si	0.018
Ge		Sn	0.007
H	0.0018	Sr	
Hf		Ta	0.004
Hg		Te	
In		Ti	86.71
Ir		Tl	
La		V	0.005
Li		W	(<0.002)
Mg	(0.0004)	Y	(0.0004)
Mn	0.0012	Zn	
Mo	(0.001)	Zr	0.003
N	0.0033		

Ag		Na	
Al	6.09	Nb	6.84
As		Nd	
Au		Ni	0.012
B	(0.0012)	O	0.171
Be		P	(<0.004)
Bi		Pb	
C	0.0081	Pd	(0.005)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.002)	Rh	
Cr	0.0174	Ru	
Cu	0.014	S	(0.001)
Fe	0.175	Sb	
Ga		Se	
Gd		Si	0.016
Ge		Sn	0.004
H	0.0025	Sr	
Hf		Ta	0.005
Hg		Te	
In		Ti	(86.3)
Ir		Tl	
La		V	0.004
Li		W	(<0.005)
Mg	(<0.002)	Y	(<0.005)
Mn	0.006	Zn	
Mo	0.0013	Zr	0.013
N	0.003		

Ag		Na	
Al	5.97	Nb	6.8
As		Nd	
Au		Ni	0.014
B	(0.0006)	O	0.174
Be		P	(<0.001)
Bi		Pb	(<0.0001)
C	0.01	Pd	(<0.005)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	0.008	Ru	
Cu	0.003	S	(0.0005)
Fe	0.181	Sb	(0.0005)
Ga		Se	
Gd		Si	0.018
Ge		Sn	(0.006)
H	(0.0006)	Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	(86.7)
Ir		Tl	
La		V	0.03
Li		W	(<0.002)
Mg	(<0.001)	Y	(0.002)
Mn	(0.003)	Zn	
Mo	0.0023	Zr	(0.005)
N	0.0061		

Ag		Na	
Al	6.06	Nb	6.82
As		Nd	
Au		Ni	0.013
B	(0.001)	O	0.166
Be		P	(<0.002)
Bi		Pb	(<0.0005)
C	0.01	Pd	(<0.005)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.004)	Rh	
Cr	0.006	Ru	(<0.001)
Cu	0.003	S	(0.001)
Fe	0.183	Sb	(0.0004)
Ga		Se	
Gd		Si	0.021
Ge		Sn	(0.005)
H		Sr	
Hf		Ta	(0.005)
Hg		Te	
In		Ti	(86.7)
Ir		Tl	
La		V	0.03
Li		W	(<0.002)
Mg	(<0.001)	Y	(0.003)
Mn	(<0.005)	Zn	
Mo	0.0019	Zr	(0.005)
N	0.005		

Titanium Alloys

Name IARM-300E
Description Titanium Alpha-Beta Alloy
Grade Ti 6-7
UNS R56700

Name IARM-Ti1023-18
Description Titanium Alpha-Beta Alloy
Grade Ti 10-2-3
UNS R56410

Name IARM-345A
Description Titanium Alpha-Beta Alloy
Grade Ti 5-2-2-4-4
UNS R58650

Name IARM-344A ↓
Description Titanium Meta-Stable Beta Alloy
Grade Ti 15-3-3-3
UNS R56260

Name IARM-344B
Description Titanium Meta-Stable Beta Alloy
Grade Ti 15-3-3-3
UNS R58153

Ag		Na	
Al	6.16	Nb	6.85
As		Nd	
Au		Ni	0.011
B	(<0.002)	O	0.18
Be		P	(<0.001)
Bi		Pb	(<0.0001)
C	0.008	Pd	(<0.001)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.004)	Rh	
Cr	0.007	Ru	(<0.01)
Cu	(<0.02)	S	(<0.001)
Fe	0.17	Sb	(<0.001)
Ga		Se	
Gd		Si	0.017
Ge		Sn	0.005
H	(0.001)	Sr	
Hf	(<0.001)	Ta	(0.006)
Hg		Te	
In		Ti	(86.5)
Ir		Tl	
La		V	0.03
Li		W	(<0.002)
Mg	(<0.001)	Y	0.003
Mn	(<0.02)	Zn	
Mo	0.0028	Zr	(<0.02)
N	0.0059		

Ag		Na	
Al	3.31	Nb	(<0.01)
As	(<0.005)	Nd	
Au		Ni	0.009
B	(<0.005)	O	0.109
Be		P	(<0.01)
Bi	(<0.005)	Pb	(<0.01)
C	0.032	Pd	
Ca	(<0.005)	Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	0.016	Ru	
Cu	0.006	S	(<0.001)
Fe	1.98	Sb	(<0.025)
Ga		Se	
Gd		Si	0.018
Ge		Sn	(0.002)
H	0.002	Sr	
Hf	(<0.005)	Ta	(<0.005)
Hg		Te	
In		Ti	84.8
Ir		Tl	
La		V	9.75
Li		W	(<0.005)
Mg	(<0.005)	Y	(<0.005)
Mn	0.0024	Zn	(<0.005)
Mo	0.003	Zr	(<0.005)
N	0.005		

Ag		Na	
Al	5.12	Nb	(0.002)
As		Nd	
Au		Ni	0.015
B	(0.001)	O	0.12
Be		P	(0.002)
Bi		Pb	
C	0.01	Pd	(0.002)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.002)	Rh	
Cr	3.89	Ru	
Cu	0.002	S	(0.001)
Fe	0.121	Sb	
Ga		Se	
Gd		Si	0.013
Ge		Sn	1.99
H	0.004	Sr	
Hf		Ta	(0.003)
Hg		Te	
In		Ti	(82.8)
Ir		Tl	
La		V	0.005
Li		W	(0.002)
Mg		Y	0.0003
Mn	0.0009	Zn	
Mo	4.09	Zr	1.9
N	0.0025		

Ag		Na	
Al	3.15	Nb	(0.005)
As		Nd	
Au		Ni	0.011
B	0.0011	O	0.107
Be		P	(0.002)
Bi		Pb	
C	0.011	Pd	(0.001)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(0.001)	Rh	
Cr	3.09	Ru	
Cu	0.002	S	(0.001)
Fe	0.2	Sb	
Ga		Se	
Gd		Si	0.03
Ge		Sn	3.09
H	(0.015)	Sr	
Hf		Ta	(0.001)
Hg		Te	
In		Ti	(74.9)
Ir		Tl	
La		V	15.3
Li		W	(0.003)
Mg		Y	<0.001
Mn	(0.003)	Zn	
Mo	0.004	Zr	(0.002)
N	0.005		

Ag		Na	
Al	3.03	Nb	(0.003)
As		Nd	
Au		Ni	0.021
B	(<0.001)	O	0.118
Be		P	(<0.003)
Bi		Pb	(<0.001)
C	0.0095	Pd	(<0.03)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.004)	Rh	
Cr	2.91	Ru	(<0.02)
Cu	0.0024	S	(<0.003)
Fe	0.118	Sb	(<0.001)
Ga		Se	
Gd		Si	0.03
Ge		Sn	3.01
H	0.007	Sr	
Hf	(<0.001)	Ta	(<0.04)
Hg		Te	
In		Ti	(76)
Ir		Tl	
La		V	14.7
Li		W	(<0.03)
Mg	(<0.004)	Y	(<0.006)
Mn	0.003	Zn	
Mo	0.006	Zr	0.002
N	0.016		

Titanium Alloys

Name IARM-Ti6242-18
Description Titanium Alpha-Beta Alloy
Grade Ti 6-2-4-2
UNS R54620

Name IARM-269B
Description Titanium Near-Alpha Alloy
Grade Ti 8-1-1
UNS R54810

Name IARM-367A
Description Titanium Pseudo-Alpha Alloy
Grade Ti 2-1.5
UNS

Ag	(<0.001)	Na	
Al	6.11	Nb	(<0.01)
As	(<0.005)	Nd	
Au		Ni	0.0038
B	(<0.01)	O	0.121
Be		P	(0.003)
Bi		Pb	(<0.01)
C	0.007	Pd	
Ca	(<0.005)	Pr	
Cd		Pt	
Ce		Re	
Co	(<0.005)	Rh	
Cr	(0.002)	Ru	
Cu	(0.003)	S	(<0.01)
Fe	0.025	Sb	(<0.001)
Ga		Se	
Gd		Si	0.077
Ge		Sn	2.06
H	0.0022	Sr	
Hf	(<0.005)	Ta	(<0.001)
Hg		Te	
In		Ti	
Ir		Tl	
La		V	(0.0017)
Li		W	(<0.005)
Mg	(<0.01)	Y	(<0.005)
Mn	(<0.005)	Zn	(<0.01)
Mo	2.02	Zr	4.05
N	0.004		

Ag		Na	
Al	7.86	Nb	0.004
As		Nd	
Au		Ni	(0.001)
B	(<0.001)	O	0.09
Be		P	(0.003)
Bi		Pb	
C	0.014	Pd	(<0.005)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.0005)	Rh	
Cr	0.0014	Ru	(0.004)
Cu	0.0023	S	(0.003)
Fe	0.071	Sb	
Ga		Se	
Gd		Si	0.025
Ge		Sn	0.008
H	0.007	Sr	
Hf		Ta	(<0.005)
Hg		Te	
In		Ti	(89.9)
Ir		Tl	
La		V	1.03
Li		W	(0.001)
Mg	(<0.0001)	Y	(<0.001)
Mn	0.0071	Zn	
Mo	0.98	Zr	0.002
N	0.006		

Ag		Na	
Al	2.02	Nb	(<0.01)
As		Nd	
Au		Ni	0.013
B	(<0.001)	O	0.105
Be		P	(<0.005)
Bi		Pb	(<0.001)
C	0.014	Pd	(<0.01)
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	(<0.002)	Rh	
Cr	0.012	Ru	(<0.01)
Cu	0.002	S	(0.0012)
Fe	0.064	Sb	(<0.0005)
Ga		Se	
Gd		Si	0.011
Ge		Sn	0.0019
H	0.003	Sr	
Hf	(<0.001)	Ta	(<0.005)
Hg		Te	
In		Ti	(96.1)
Ir		Tl	
La		V	0.005
Li		W	(<0.002)
Mg	(<0.001)	Y	(<0.001)
Mn	1.61	Zn	
Mo	0.0023	Zr	0.003
N	0.0074		

Section 15

Zinc Alloys

Name MBH-41X Z11 A
Description Residuals in Pure Zinc
Grade
UNS

Ag		Na	
Al	0.0261	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi	0.0189	Pb	0.0077
C		Pd	
Ca		Pr	
Cd	0.0155	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0116	S	
Fe	0.0019	Sb	0.0026
Ga		Se	
Gd		Si	
Ge		Sn	0.0072
H		Sr	
Hf		Ta	
Hg	(0.0009)	Te	
In	0.0345	Ti	
Ir		Tl	(0.0001)
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	(0.005)
N			

Name MBH-41X Z3 M
Description Residuals in Pure Zinc
Grade
UNS

Ag		Na	
Al	0.00158	Nb	
As		Nd	
Au		Ni	0.00209
B		O	
Be		P	
Bi	0.00315	Pb	0.00502
C		Pd	
Ca		Pr	
Cd	0.00327	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.00345	S	
Fe	0.00605	Sb	0.00167
Ga		Se	
Gd		Si	
Ge		Sn	0.00297
H		Sr	
Hf		Ta	
Hg	0.00289	Te	
In	0.00233	Ti	
Ir		Tl	0.0021
La		V	
Li		W	
Mg	(0.00034)	Y	
Mn	0.00524	Zn	
Mo		Zr	(<0.02)
N			

Name MBH-41X Z4 L ↓
Description Residuals in Pure Zinc
Grade
UNS

Ag		Na	
Al	0.0065	Nb	
As		Nd	
Au		Ni	0.0032
B		O	
Be		P	
Bi	0.00319	Pb	0.00584
C		Pd	
Ca		Pr	
Cd	0.00437	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.00326	S	
Fe	0.0148	Sb	0.0034
Ga		Se	
Gd		Si	
Ge		Sn	0.0021
H		Sr	
Hf		Ta	
Hg	0.0025	Te	
In	0.00304	Ti	
Ir		Tl	0.00277
La		V	
Li		W	
Mg	0.00331	Y	
Mn	0.00286	Zn	
Mo		Zr	(<0.005)
N			

Name MBH-41X Z5 N
Description Residuals in Pure Zinc
Grade
UNS

Ag		Na	
Al	0.0243	Nb	
As		Nd	
Au		Ni	0.00514
B		O	
Be		P	
Bi	0.0056	Pb	0.0286
C		Pd	
Ca		Pr	
Cd	0.0165	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0109	S	
Fe	0.0262	Sb	0.0054
Ga		Se	
Gd		Si	
Ge		Sn	0.00632
H		Sr	
Hf		Ta	
Hg	0.005	Te	
In	0.00573	Ti	
Ir		Tl	0.0068
La		V	
Li		W	
Mg	0.0107	Y	
Mn	0.00492	Zn	
Mo		Zr	1.9
N			

Name MBH-41X Z6 A
Description Residuals in Pure Zinc
Grade
UNS

Ag		Na	
Al	0.0096	Nb	
As		Nd	
Au		Ni	0.0002
B		O	
Be		P	
Bi	0.0122	Pb	0.031
C		Pd	
Ca		Pr	
Cd	0.0093	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0088	S	
Fe	(0.002)	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.0038
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0228	Ti	
Ir		Tl	0.0004
La		V	
Li		W	
Mg	(<0.0005)	Y	
Mn	0.0002	Zn	
Mo		Zr	(0.002)
N			

Zinc Alloys

Name MBH-41X 0336Zn1 L

Description Zinc with Impurities

Grade

UNS

Ag		Na	
Al	0.0177	Nb	
As	0.0008	Nd	
Au		Ni	0.0009
B		O	
Be		P	
Bi		Pb	1.007
C		Pd	
Ca		Pr	
Cd	0.0067	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0088	S	
Fe	0.0106	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.0051
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0062	Y	
Mn	0.0102	Zn	
Mo		Zr	
N			

Name MBH-41X 0336Zn2 N

Description Zinc with Impurities

Grade

UNS

Ag	0.0131	Na	
Al	1	Nb	
As		Nd	
Au		Ni	0.0047
B		O	
Be		P	
Bi	0.0043	Pb	0.492
C		Pd	
Ca		Pr	
Cd	0.147	Pt	
Ce		Re	
Co	0.019	Rh	
Cr		Ru	
Cu	0.216	S	
Fe	0.0283	Sb	0.0019
Ga		Se	
Gd		Si	
Ge		Sn	0.0547
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	0.0016
La		V	
Li		W	
Mg	0.0568	Y	
Mn	0.0227	Zn	
Mo		Zr	
N			

Name MBH-41X 0336Zn3 K

Description Zinc with Impurities

Grade

UNS

Ag		Na	
Al	0.336	Nb	
As	0.0003	Nd	
Au		Ni	0.0022
B		O	
Be		P	
Bi		Pb	0.0282
C		Pd	
Ca		Pr	
Cd	0.341	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.353	S	
Fe	0.0456	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.127
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.147	Y	
Mn	0.0106	Zn	
Mo		Zr	
N			

Name MBH-41X 4380Zn1 D

Description Zinc with Impurities

Grade

UNS

Ag	0.0012	Na	
Al	0.039	Nb	
As		Nd	
Au		Ni	0.0058
B		O	
Be		P	
Bi	0.0021	Pb	0.0618
C		Pd	
Ca		Pr	
Cd	0.394	Pt	
Ce		Re	
Co		Rh	
Cr	0.0007	Ru	
Cu	0.178	S	
Fe	0.0276	Sb	0.0019
Ga		Se	
Gd		Si	
Ge		Sn	0.051
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0004
Ir		Tl	
La		V	
Li		W	
Mg	0.0032	Y	
Mn	0.0006	Zn	
Mo		Zr	
N			

Name MBH-41X 4380Zn2 C

Description Zinc with Impurities

Grade

UNS

Ag		Na	
Al	0.0153	Nb	
As		Nd	
Au		Ni	0.0023
B		O	
Be		P	
Bi	0.0076	Pb	0.268
C		Pd	
Ca		Pr	
Cd	0.284	Pt	
Ce		Re	
Co		Rh	
Cr	0.0027	Ru	
Cu	0.0288	S	
Fe	0.048	Sb	0.0093
Ga		Se	
Gd		Si	
Ge		Sn	0.0021
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0251
Ir		Tl	
La		V	
Li		W	
Mg	0.0243	Y	
Mn	0.0087	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-4IX 4380Zn3 C ↓

Description Zinc with Impurities

Grade

UNS

Ag		Na	
Al	0.0203	Nb	
As		Nd	
Au		Ni	0.012
B		O	
Be		P	
Bi	0.0103	Pb	0.18
C		Pd	
Ca		Pr	
Cd	0.095	Pt	
Ce		Re	
Co		Rh	
Cr	0.0029	Ru	
Cu	0.073	S	
Fe	0.017	Sb	0.0046
Ga		Se	
Gd		Si	
Ge		Sn	0.08
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.125
Ir		Tl	
La		V	
Li		W	
Mg	0.022	Y	
Mn	0.018	Zn	
Mo		Zr	
N			

Name MBH-4IX 4380Zn4 D ↓

Description Zinc with Impurities

Grade

UNS

Ag		Na	
Al	0.446	Nb	
As		Nd	
Au		Ni	0.0172
B		O	
Be		P	
Bi	0.0101	Pb	0.31
C		Pd	
Ca		Pr	
Cd	0.086	Pt	
Ce		Re	
Co	0.0018	Rh	
Cr	0.0029	Ru	
Cu	0.0284	S	
Fe	0.017	Sb	0.0156
Ga		Se	
Gd		Si	
Ge		Sn	0.0416
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.0003)
Ir		Tl	
La		V	
Li		W	
Mg	0.118	Y	
Mn	0.0092	Zn	
Mo		Zr	
N			

Name MBH-4IX 4380Zn5 C

Description Zinc with Impurities

Grade

UNS

Ag		Na	
Al	0.0215	Nb	
As		Nd	
Au		Ni	0.00147
B		O	
Be		P	
Bi	0.0308	Pb	0.14
C		Pd	
Ca		Pr	
Cd	0.0571	Pt	
Ce		Re	
Co		Rh	
Cr	0.0075	Ru	
Cu	0.071	S	
Fe	0.012	Sb	0.0061
Ga		Se	
Gd		Si	
Ge		Sn	0.0101
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.339
Ir		Tl	
La		V	
Li		W	
Mg	0.00165	Y	
Mn	0.035	Zn	
Mo		Zr	
N			

Name MBH-4IX 4380Zn6 D

Description Zinc with Impurities

Grade

UNS

Ag	0.003	Na	
Al	0.026	Nb	
As		Nd	
Au		Ni	0.0073
B		O	
Be		P	
Bi	0.0047	Pb	0.427
C		Pd	
Ca		Pr	
Cd	0.0466	Pt	
Ce		Re	
Co	0.0091	Rh	
Cr	0.0064	Ru	
Cu	0.0327	S	
Fe	0.0307	Sb	(0.002)
Ga		Se	
Gd		Si	
Ge		Sn	0.101
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0029
Ir		Tl	
La		V	
Li		W	
Mg	0.0044	Y	
Mn	0.2	Zn	
Mo		Zr	
N			

Name MBH-4IX 4380Zn7 D

Description Zinc with Impurities

Grade

UNS

Ag		Na	
Al	0.277	Nb	
As		Nd	
Au		Ni	0.012
B		O	
Be		P	
Bi		Pb	1.18
C		Pd	
Ca		Pr	
Cd	0.0156	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0133	S	
Fe	0.0018	Sb	0.086
Ga		Se	
Gd		Si	
Ge		Sn	0.0036
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0065
Ir		Tl	
La		V	
Li		W	
Mg	0.0029	Y	
Mn	0.0036	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-41X GLV1 E
Description Galvanising Alloy
Grade
UNS

Name MBH-41X GLV12 A
Description Galvanising Alloy
Grade
UNS

Name MBH-41X GLV13 A
Description Galvanising Alloy
Grade
UNS

Name MBH-41X GLV2 C
Description Galvanising Alloy
Grade
UNS

Name MBH-41X GLV3 C
Description Galvanising Alloy
Grade
UNS

Ag		Na	
Al	0.285	Nb	
As	(0.0004)	Nd	
Au		Ni	0.0021
B		O	
Be		P	
Bi	0.0045	Pb	0.0175
C		Pd	
Ca		Pr	
Cd	0.0087	Pt	
Ce		Re	
Co	0.0008	Rh	
Cr		Ru	
Cu	0.0188	S	
Fe	(0.001)	Sb	0.0016
Ga		Se	
Gd		Si	
Ge		Sn	0.0049
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0021	Y	
Mn		Zn	
Mo		Zr	
N			

Ag	0.0043	Na	
Al	0.171	Nb	
As		Nd	
Au		Ni	0.0095
B		O	
Be		P	
Bi	0.005	Pb	0.01
C		Pd	
Ca		Pr	
Cd	0.005	Pt	
Ce		Re	
Co	0.0035	Rh	
Cr		Ru	
Cu	0.0089	S	
Fe	0.016	Sb	0.0064
Ga		Se	
Gd		Si	
Ge		Sn	0.0082
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0043	Y	
Mn	0.0086	Zn	
Mo		Zr	
N			

Ag	0.0011	Na	
Al	0.22	Nb	
As		Nd	
Au		Ni	0.0028
B		O	
Be		P	
Bi	0.0008	Pb	0.003
C		Pd	
Ca		Pr	
Cd	0.0011	Pt	
Ce		Re	
Co	0.0012	Rh	
Cr		Ru	
Cu	0.005	S	
Fe	0.006	Sb	<0.005
Ga		Se	
Gd		Si	
Ge		Sn	0.0012
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0013	Y	
Mn	0.0008	Zn	
Mo		Zr	
N			

Ag		Na	
Al	0.0905	Nb	
As	0.0017	Nd	
Au		Ni	0.0053
B		O	
Be		P	
Bi	0.0158	Pb	0.0248
C		Pd	
Ca		Pr	
Cd	0.0037	Pt	
Ce		Re	
Co	0.0055	Rh	
Cr	0.0015	Ru	
Cu	0.0057	S	
Fe	0.0155	Sb	0.0049
Ga		Se	
Gd		Si	
Ge		Sn	0.0097
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0006	Y	
Mn	0.0218	Zn	
Mo		Zr	
N			

Ag		Na	
Al	0.326	Nb	
As	0.0036	Nd	
Au		Ni	0.0335
B		O	
Be		P	
Bi	0.0031	Pb	0.0249
C		Pd	
Ca		Pr	
Cd	0.0183	Pt	
Ce		Re	
Co	0.0034	Rh	
Cr	0.0003	Ru	
Cu	0.0332	S	
Fe	0.0014	Sb	0.0555
Ga		Se	
Gd		Si	
Ge		Sn	0.0031
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0014	Y	
Mn	0.0185	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-4IX GLV5 B

Description Galvanising Alloy

Grade

UNS

Ag		Na	
Al	0.0139	Nb	
As	0.00044	Nd	
Au		Ni	0.0025
B		O	
Be		P	
Bi	0.0098	Pb	0.0166
C		Pd	
Ca		Pr	
Cd	0.0136	Pt	
Ce		Re	
Co	0.0011	Rh	
Cr		Ru	
Cu	0.0103	S	
Fe	0.0443	Sb	0.148
Ga		Se	
Gd		Si	
Ge		Sn	0.0172
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0014	Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-4IX GLV6 B

Description Galvanising Alloy

Grade

UNS

Ag		Na	
Al	0.441	Nb	
As		Nd	
Au		Ni	0.0007
B		O	
Be		P	
Bi	0.0254	Pb	0.097
C		Pd	
Ca		Pr	
Cd	0.0051	Pt	
Ce		Re	
Co	0.0061	Rh	
Cr	0.0007	Ru	
Cu	0.0371	S	
Fe	0.002	Sb	0.0122
Ga		Se	
Gd		Si	
Ge		Sn	0.0155
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.00235	Zn	
Mo		Zr	
N			

Name MBH-4IX GLV7 A ↓

Description Galvanising Alloy

Grade

UNS

Ag		Na	
Al	0.399	Nb	
As	0.0016	Nd	
Au		Ni	0.006
B		O	
Be		P	
Bi	0.0108	Pb	0.082
C		Pd	
Ca		Pr	
Cd	0.00056	Pt	
Ce		Re	
Co	(0.0001)	Rh	
Cr	0.001	Ru	
Cu	0.023	S	
Fe	0.0031	Sb	0.0031
Ga		Se	
Gd		Si	
Ge		Sn	(0.0006)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.0025	Zn	
Mo		Zr	
N			

Name MBH-4IX GLV7 B

Description Galvanising Alloy

Grade

UNS

Ag	0.0016	Na	
Al	0.397	Nb	
As	(0.0006)	Nd	
Au		Ni	0.0146
B		O	
Be		P	
Bi	0.0114	Pb	0.081
C		Pd	
Ca		Pr	
Cd	0.0006	Pt	
Ce		Re	
Co	0.0016	Rh	
Cr		Ru	
Cu	0.0269	S	
Fe	0.0051	Sb	0.0036
Ga		Se	
Gd		Si	
Ge		Sn	0.0012
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0048	Y	
Mn	0.0008	Zn	
Mo		Zr	
N			

Name MBH-4IX GLV9 A

Description Galvanising Alloy

Grade

UNS

Ag		Na	
Al	0.547	Nb	
As		Nd	
Au		Ni	0.0009
B		O	
Be		P	
Bi	0.0019	Pb	0.0043
C		Pd	
Ca		Pr	
Cd	0.0028	Pt	
Ce		Re	
Co	0.0005	Rh	
Cr		Ru	
Cu	0.0037	S	
Fe	0.0039	Sb	0.0048
Ga		Se	
Gd		Si	
Ge		Sn	0.0028
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0014	Y	
Mn	0.0027	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-41X ZSC1 A
Description RoHS Monitors
Grade
UNS

Name MBH-41X ZSC3 A
Description RoHS Monitors
Grade
UNS

Name MBH-41X ZSC4 A
Description RoHS Monitors
Grade
UNS

Name MBH-41X ZSC6 A
Description RoHS Monitors
Grade
UNS

Name MBH-169X ZNSU51
Description Zinc - Setting Up Sample
Grade Setting Up Sample
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.0621
C		Pd	
Ca		Pr	
Cd	0.0288	Pt	
Ce		Re	
Co		Rh	
Cr	0.0039	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.026	Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.0273
C		Pd	
Ca		Pr	
Cd	0.119	Pt	
Ce		Re	
Co		Rh	
Cr	0.0148	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.0021	Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.156
C		Pd	
Ca		Pr	
Cd	0.0131	Pt	
Ce		Re	
Co		Rh	
Cr	0.0299	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.05	Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.0077
C		Pd	
Ca		Pr	
Cd	0.215	Pt	
Ce		Re	
Co		Rh	
Cr	<0.0002	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.029	Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag	0.04	Na	
Al	0.35	Nb	
As		Nd	
Au		Ni	0.06
B		O	
Be		P	
Bi	0.005	Pb	0.6
C		Pd	
Ca		Pr	
Cd	0.3	Pt	
Ce		Re	
Co		Rh	
Cr	0.001	Ru	
Cu	0.35	S	
Fe	0.05	Sb	0.2
Ga		Se	
Gd		Si	0.003
Ge		Sn	0.3
H		Sr	
Hf		Ta	
Hg		Te	
In	0.25	Ti	0.001
Ir		Tl	0.06
La		V	
Li		W	
Mg	0.002	Y	
Mn	0.001	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-43X Z7 A
Description Zinc-Aluminum Alloy
Grade Beric type Alloy
UNS

Name MBH-43X GALF3 A
Description Zinc-Aluminum Alloy
Grade Galfan Type Alloys
UNS Z38510*

Name MBH-43X SC2 A
Description Zinc-Aluminum Alloy
Grade spin-casting alloys
UNS

Name MBH-43X SC3 A
Description Zinc-Aluminum Alloy
Grade spin-casting alloys
UNS

Name MBH-42X Z1 J
Description Zinc-Aluminum Alloy
Grade spin-casting alloys
UNS

Ag		Na	
Al	3.68	Nb	
As		Nd	
Au		Ni	0.0005
B		O	
Be	0.0194	P	
Bi	(0.001)	Pb	0.0058
C		Pd	
Ca		Pr	
Cd	0.00092	Pt	
Ce		Re	
Co		Rh	
Cr	0.0003	Ru	
Cu	3.14	S	
Fe	0.029	Sb	0.0016
Ga		Se	
Gd		Si	
Ge		Sn	0.0031
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.067
Ir		Tl	
La		V	
Li		W	
Mg	0.062	Y	
Mn	0.0025	Zn	
Mo		Zr	
N			

Ag		Na	
Al	8.37	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.0032
C		Pd	
Ca		Pr	
Cd	0.0018	Pt	
Ce	0.0152	Re	
Co		Rh	
Cr		Ru	
Cu	0.507	S	
Fe	0.018	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.0025
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.0076	V	
Li		W	
Mg	0.0099	Y	
Mn		Zn	
Mo		Zr	
N			

Ag		Na	
Al	3.41	Nb	
As		Nd	
Au		Ni	0.0096
B		O	
Be		P	
Bi		Pb	0.0097
C		Pd	
Ca		Pr	
Cd	0.0018	Pt	
Ce		Re	
Co		Rh	
Cr	0.023	Ru	
Cu	4.8	S	
Fe	0.046	Sb	
Ga		Se	
Gd		Si	0.0133
Ge		Sn	0.0031
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.498	Y	
Mn	0.0183	Zn	
Mo		Zr	
N			

Ag		Na	
Al	3.14	Nb	
As		Nd	
Au		Ni	0.0261
B		O	
Be		P	
Bi		Pb	0.0066
C		Pd	
Ca		Pr	
Cd	0.0028	Pt	
Ce		Re	
Co		Rh	
Cr	0.0108	Ru	
Cu	3.03	S	
Fe	0.018	Sb	
Ga		Se	
Gd		Si	0.022
Ge		Sn	0.0078
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.257	Y	
Mn	0.0337	Zn	
Mo		Zr	
N			

Ag		Na	
Al	4.66	Nb	
As		Nd	
Au		Ni	0.0014
B		O	
Be		P	
Bi		Pb	0.0017
C		Pd	
Ca		Pr	
Cd	0.0014	Pt	
Ce	0.0011	Re	
Co		Rh	
Cr	0.0004	Ru	
Cu	0.005	S	
Fe	0.013	Sb	0.0011
Ga		Se	
Gd		Si	(0.002)
Ge		Sn	0.0007
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	(0.0008)	V	
Li		W	
Mg	0.0009	Y	
Mn	0.0038	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-42X Z10 A
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-42X Z11 A
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-42X Z12 A
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-42X Z15 A
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-42X Z4 J
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	4.93	Nb	
As		Nd	
Au		Ni	0.0099
B		O	
Be		P	
Bi		Pb	0.0065
C		Pd	
Ca		Pr	
Cd	0.0029	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.314	S	
Fe	0.0009	Sb	0.0022
Ga		Se	
Gd		Si	
Ge		Sn	0.0033
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0018	Ti	
Ir		Tl	0.0013
La		V	
Li		W	
Mg	0.002	Y	
Mn	0.0183	Zn	
Mo		Zr	
N			

Ag		Na	
Al	3.19	Nb	
As		Nd	
Au		Ni	0.0241
B		O	
Be		P	
Bi		Pb	0.0058
C		Pd	
Ca		Pr	
Cd	0.002	Pt	
Ce	0.0014	Re	
Co		Rh	
Cr	0.0016	Ru	
Cu	0.093	S	
Fe	(0.036)	Sb	0.0047
Ga		Se	
Gd		Si	
Ge		Sn	0.0017
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0037	Ti	
Ir		Tl	0.0047
La	(0.0009)	V	
Li		W	
Mg	0.0329	Y	
Mn	0.0196	Zn	
Mo		Zr	
N			

Ag		Na	
Al	4.72	Nb	
As		Nd	
Au		Ni	0.0413
B		O	
Be		P	
Bi		Pb	0.0079
C		Pd	
Ca		Pr	
Cd	0.00277	Pt	
Ce	0.0116	Re	
Co		Rh	
Cr	0.00063	Ru	
Cu	0.156	S	
Fe	0.046	Sb	0.007
Ga		Se	
Gd		Si	
Ge		Sn	0.0022
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0068	Ti	
Ir		Tl	0.0076
La	0.0084	V	
Li		W	
Mg	0.0488	Y	
Mn	0.0483	Zn	
Mo		Zr	
N			

Ag		Na	
Al	9.99	Nb	
As		Nd	
Au		Ni	0.0017
B		O	
Be		P	
Bi		Pb	0.0074
C		Pd	
Ca		Pr	
Cd	0.0023	Pt	
Ce		Re	
Co		Rh	
Cr	0.0003	Ru	
Cu	0.0028	S	
Fe	0.026	Sb	0.0006
Ga		Se	
Gd		Si	
Ge		Sn	0.0006
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0024	Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0026	Y	
Mn	0.0037	Zn	
Mo		Zr	
N			

Ag		Na	
Al	3.52	Nb	
As		Nd	
Au		Ni	0.017
B		O	
Be		P	
Bi		Pb	0.0133
C		Pd	
Ca		Pr	
Cd	0.0065	Pt	
Ce	0.0361	Re	
Co		Rh	
Cr	(0.0002)	Ru	
Cu	0.0752	S	
Fe	0.019	Sb	
Ga		Se	
Gd		Si	0.006
Ge		Sn	0.0052
H		Sr	
Hf		Ta	
Hg		Te	
In	0.0025	Ti	
Ir		Tl	
La	0.0183	V	
Li		W	
Mg	0.0663	Y	
Mn	0.0083	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-42X Z7 D
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	4.35	Nb	
As		Nd	
Au		Ni	0.008
B		O	
Be		P	
Bi		Pb	0.004
C		Pd	
Ca		Pr	
Cd	0.0021	Pt	
Ce	0.059	Re	
Co		Rh	
Cr		Ru	
Cu	0.024	S	
Fe	0.024	Sb	
Ga		Se	
Gd		Si	0.002
Ge		Sn	0.0025
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.027	V	
Li		W	
Mg	0.0097	Y	
Mn	0.0047	Zn	
Mo		Zr	
N			

Name MBH-42X Z8 A ↓
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	7.03	Nb	
As		Nd	
Au		Ni	0.0019
B		O	
Be		P	
Bi		Pb	0.0025
C		Pd	
Ca		Pr	
Cd	0.0003	Pt	
Ce	0.0081	Re	
Co		Rh	
Cr	(0.0002)	Ru	
Cu	0.0215	S	
Fe	0.013	Sb	
Ga		Se	
Gd		Si	0.013
Ge		Sn	(0.002)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.0079	V	
Li		W	
Mg	0.0033	Y	
Mn	0.0014	Zn	
Mo		Zr	
N			

Name MBH-43X GALF1 A
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	4.68	Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.0505
C		Pd	
Ca		Pr	
Cd	0.0499	Pt	
Ce	0.0569	Re	
Co		Rh	
Cr		Ru	
Cu	4.39	S	
Fe	0.061	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.0514
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La	0.0284	V	
Li		W	
Mg	0.0999	Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-43X SC1 A
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	3.75	Nb	
As		Nd	
Au		Ni	0.0161
B		O	
Be		P	
Bi		Pb	0.015
C		Pd	
Ca		Pr	
Cd	0.0011	Pt	
Ce		Re	
Co		Rh	
Cr	0.0082	Ru	
Cu	1.903	S	
Fe	0.073	Sb	
Ga		Se	
Gd		Si	0.022
Ge		Sn	0.0082
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.74	Y	
Mn	0.0201	Zn	
Mo		Zr	
N			

Name MBH-43X SC4 A
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	4.35	Nb	
As		Nd	
Au		Ni	0.0249
B		O	
Be		P	
Bi		Pb	0.0064
C		Pd	
Ca		Pr	
Cd	0.0058	Pt	
Ce		Re	
Co		Rh	
Cr	0.009	Ru	
Cu	1.122	S	
Fe	0.022	Sb	
Ga		Se	
Gd		Si	0.022
Ge		Sn	0.0056
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.093	Y	
Mn	0.044	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-43X Z1 L
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-43X Z10 A
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-43X Z11 F
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-43X Z12 E
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-43X Z13 E
Description Zinc-Aluminum Alloy
Grade
UNS

Ag	0.0037	Na	
Al	4.48	Nb	
As		Nd	
Au		Ni	0.0069
B		O	
Be		P	
Bi	(0.0008)	Pb	0.0011
C		Pd	
Ca		Pr	
Cd	0.0004	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.72	S	
Fe	0.0009	Sb	(0.0006)
Ga		Se	
Gd		Si	
Ge		Sn	(0.0005)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0345	Y	
Mn	0.0075	Zn	
Mo		Zr	
N			

Ag		Na	
Al	3.99	Nb	
As		Nd	
Au		Ni	0.0036
B		O	
Be		P	
Bi		Pb	0.0046
C		Pd	
Ca		Pr	
Cd	0.0014	Pt	
Ce		Re	
Co		Rh	
Cr	0.0003	Ru	
Cu	2.97	S	
Fe	0.007	Sb	
Ga		Se	
Gd		Si	0.009
Ge		Sn	0.0012
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0403	Y	
Mn	0.005	Zn	
Mo		Zr	
N			

Ag		Na	
Al	11.12	Nb	
As		Nd	
Au		Ni	0.0014
B		O	
Be		P	
Bi	0.0046	Pb	0.0202
C		Pd	
Ca		Pr	
Cd	0.0175	Pt	
Ce		Re	
Co		Rh	
Cr	(0.0003)	Ru	
Cu	0.335	S	
Fe	0.015	Sb	0.0009
Ga		Se	
Gd		Si	0.0013
Ge		Sn	0.0145
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0357	Y	
Mn	0.0032	Zn	
Mo		Zr	
N			

Ag		Na	
Al	10.38	Nb	
As		Nd	
Au		Ni	0.0033
B		O	
Be		P	
Bi	0.0021	Pb	0.0041
C		Pd	
Ca		Pr	
Cd	0.0045	Pt	
Ce		Re	
Co		Rh	
Cr	0.0008	Ru	
Cu	0.791	S	
Fe	0.037	Sb	0.0032
Ga		Se	
Gd		Si	(0.002)
Ge		Sn	0.0017
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.005
Ir		Tl	
La		V	
Li		W	
Mg	0.0287	Y	
Mn	0.0026	Zn	
Mo		Zr	
N			

Ag		Na	
Al	9.01	Nb	
As		Nd	
Au		Ni	0.0036
B		O	
Be		P	
Bi	0.0014	Pb	0.0086
C		Pd	
Ca		Pr	
Cd	0.0072	Pt	
Ce		Re	
Co		Rh	
Cr	0.0004	Ru	
Cu	1.113	S	
Fe	0.0045	Sb	0.002
Ga		Se	
Gd		Si	(0.001)
Ge		Sn	0.0056
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0198	Y	
Mn	0.0025	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-43X Z14 F
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	7.98	Nb	
As		Nd	
Au		Ni	0.0058
B		O	
Be		P	
Bi	0.0106	Pb	0.0019
C		Pd	
Ca		Pr	
Cd	0.00567	Pt	
Ce		Re	
Co		Rh	
Cr	0.0037	Ru	
Cu	1.238	S	
Fe	0.0025	Sb	0.0105
Ga		Se	
Gd		Si	(<0.001)
Ge		Sn	0.0005
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	<0.001
Ir		Tl	
La		V	
Li		W	
Mg	0.0123	Y	
Mn	(<0.001)	Zn	
Mo		Zr	
N			

Name MBH-43X Z2 P ↓
Description Zinc-Aluminum Alloy
Grade
UNS

Ag	0.0098	Na	
Al	4.07	Nb	
As		Nd	
Au		Ni	0.01
B		O	
Be		P	
Bi	0.0038	Pb	0.0048
C		Pd	
Ca		Pr	
Cd	0.0031	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	1.019	S	
Fe	0.0013	Sb	0.0012
Ga		Se	
Gd		Si	
Ge		Sn	0.0033
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0614	Y	
Mn	0.0162	Zn	
Mo		Zr	
N			

Name MBH-43X Z21 D
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	23.9	Nb	
As		Nd	
Au		Ni	0.0021
B		O	
Be		P	
Bi		Pb	0.0087
C		Pd	
Ca		Pr	
Cd	0.001	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	2.68	S	
Fe	0.0067	Sb	
Ga		Se	
Gd		Si	0.0191
Ge		Sn	0.0007
H		Sr	(0.0005)
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0142	Y	
Mn	0.0022	Zn	
Mo		Zr	
N			

Name MBH-43X Z3 M
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	3.4	Nb	
As		Nd	
Au		Ni	0.0062
B		O	
Be		P	
Bi	0.0092	Pb	0.0077
C		Pd	
Ca		Pr	
Cd	0.0109	Pt	
Ce		Re	
Co		Rh	
Cr	0.0046	Ru	
Cu	1.499	S	
Fe	(0.042)	Sb	0.0029
Ga		Se	
Gd		Si	
Ge		Sn	0.0058
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.114	Y	
Mn	0.0013	Zn	
Mo		Zr	
N			

Name MBH-43X Z4 C
Description Zinc-Aluminum Alloy
Grade
UNS

Ag		Na	
Al	4.79	Nb	
As		Nd	
Au		Ni	0.0258
B		O	
Be		P	
Bi	0.0113	Pb	0.0062
C		Pd	
Ca		Pr	
Cd	0.0033	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	2.69	S	
Fe	0.0017	Sb	(0.002)
Ga		Se	
Gd		Si	(0.001)
Ge		Sn	0.003
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.048	Y	
Mn	0.0153	Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-43X Z5 B
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-43X Z8 A
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-43X Z9 A
Description Zinc-Aluminum Alloy
Grade
UNS

Name MBH-41X ZSb4 A
Description Zinc-Antimony Alloy
Grade
UNS

Name MBH-41X ZSb8 A
Description Zinc-Antimony Alloy
Grade
UNS

Ag	0.0254	Na	
Al	3.164	Nb	
As		Nd	
Au		Ni	0.0056
B		O	
Be		P	
Bi	0.0148	Pb	0.0029
C		Pd	
Ca		Pr	
Cd	0.003	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	5.92	S	
Fe	0.1	Sb	0.065
Ga		Se	
Gd		Si	
Ge		Sn	(0.0004)
H		Sr	(0.0013)
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.0144	Y	
Mn	0.0061	Zn	
Mo		Zr	
N			

Ag		Na	
Al	2.51	Nb	
As		Nd	
Au		Ni	0.00033
B		O	
Be		P	
Bi		Pb	0.0027
C		Pd	
Ca		Pr	
Cd	0.0009	Pt	
Ce		Re	
Co		Rh	
Cr	0.00024	Ru	
Cu	0.481	S	
Fe	(0.002)	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	(0.0005)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.00155	Y	
Mn	0.00021	Zn	
Mo		Zr	
N			

Ag		Na	
Al	3.17	Nb	
As		Nd	
Au		Ni	0.0027
B		O	
Be	0.001	P	
Bi	0.0033	Pb	0.0078
C		Pd	
Ca		Pr	
Cd	0.0034	Pt	
Ce		Re	
Co		Rh	
Cr	0.0034	Ru	
Cu	4.82	S	
Fe	0.073	Sb	0.0033
Ga		Se	
Gd		Si	
Ge		Sn	0.002
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.0012
Ir		Tl	
La		V	
Li		W	
Mg	0.0472	Y	
Mn	0.0108	Zn	
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	3.78
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu		S	
Fe		Sb	7.68
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Zinc Alloys

Name MBH-41X 2951Zn1 A

Description Zinc-Copper Alloy

Grade

UNS

Ag		Na	
Al	0.029	Nb	
As		Nd	
Au		Ni	0.0038
B		O	
Be		P	
Bi		Pb	0.0042
C		Pd	
Ca		Pr	
Cd	0.0005	Pt	
Ce		Re	
Co		Rh	
Cr	0.083	Ru	
Cu	0.79	S	
Fe	0.011	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	(0.0007)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.278
Ir		Tl	
La		V	
Li		W	
Mg	0.0029	Y	
Mn	0.0013	Zn	
Mo		Zr	
N			

Name MBH-41X 2951Zn2 A

Description Zinc-Copper Alloy

Grade

UNS

Ag		Na	
Al	0.032	Nb	
As		Nd	
Au		Ni	0.0027
B		O	
Be		P	
Bi		Pb	0.004
C		Pd	
Ca		Pr	
Cd	0.0037	Pt	
Ce		Re	
Co		Rh	
Cr	0.142	Ru	
Cu	1.37	S	
Fe	0.019	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	(0.0015)
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	0.209
Ir		Tl	
La		V	
Li		W	
Mg	0.0123	Y	
Mn	0.0011	Zn	
Mo		Zr	
N			

Name MBH-41X ZNi2 A ↓

Description Zinc-Nickel Alloy

Grade

UNS

Ag		Na	
Al	0.0135	Nb	
As		Nd	
Au		Ni	1.97
B		O	
Be		P	
Bi	0.005	Pb	0.0172
C		Pd	
Ca		Pr	
Cd	0.001	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0056	S	
Fe	0.0061	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.141
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-41X ZNiBi A

Description Zinc-Nickel Alloy

Grade

UNS

Ag		Na	
Al	0.05	Nb	
As		Nd	
Au		Ni	2.02
B		O	
Be		P	
Bi	0.502	Pb	0.0187
C		Pd	
Ca		Pr	
Cd	0.002	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.0132	S	
Fe	0.0133	Sb	
Ga		Se	
Gd		Si	
Ge		Sn	0.154
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Section 16

Zirconium Alloys

Name IARM-Zr702-18

Description Zirconium Alloy

Grade Grade 702

UNS

Ag	(<0.005)	Na	(<0.0001)
Al	0.014	Nb	(<0.0001)
As	(<0.005)	Nd	
Au		Ni	(0.0022)
B	(<0.0005)	O	0.141
Be	(<0.0001)	P	(<0.015)
Bi	(0.00025)	Pb	(<0.001)
C	0.017	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.005)	Pt	
Ce	(<0.0001)	Re	(<0.0001)
Co	(<0.005)	Rh	
Cr	0.009	Ru	(<0.001)
Cu	(0.001)	S	(0.0002)
Fe	0.09	Sb	(<0.0001)
Ga	(<0.0001)	Se	(<0.0001)
Gd		Si	(<0.016)
Ge	(<0.0001)	Sn	0.04
H	0.0011	Sr	
Hf	0.84	Ta	(0.0002)
Hg		Te	(<0.0001)
In	(0.0005)	Ti	0.004
Ir		Tl	
La	(<0.0001)	V	(0.005)
Li		W	(0.0001)
Mg	(<0.001)	Y	(<0.006)
Mn	(0.002)	Zn	(<0.005)
Mo	(0.001)	Zr	(98.78)
N	0.003		

Name IARM-Zr705-18

Description Zirconium Alloy

Grade Grade 705

UNS

Ag	(<0.006)	Na	(<0.0001)
Al	(<0.01)	Nb	2.53
As	(<0.05)	Nd	
Au		Ni	(0.0021)
B	(<0.001)	O	0.133
Be	(<0.0001)	P	(<0.015)
Bi	(0.00002)	Pb	(<0.006)
C	0.009	Pd	(<0.001)
Ca	(<0.005)	Pr	
Cd	(<0.0005)	Pt	
Ce	(<0.0001)	Re	(<0.005)
Co	(<0.005)	Rh	
Cr	0.007	Ru	(<0.001)
Cu	0.007	S	(0.0001)
Fe	0.08	Sb	(<0.0001)
Ga	(<0.0001)	Se	(<0.005)
Gd		Si	(<0.006)
Ge	(<0.0001)	Sn	(0.02)
H	0.0012	Sr	
Hf	0.38	Ta	(0.0018)
Hg		Te	(<0.0001)
In	(<0.0005)	Ti	(0.0015)
Ir		Tl	
La	(<0.0001)	V	(0.004)
Li		W	(0.0001)
Mg	(<0.005)	Y	(<0.006)
Mn	(<0.005)	Zn	(<0.0005)
Mo	(<0.005)	Zr	(96.76)
N	0.005		

Section 17

Set-Up Samples

Name MBH-RA10-20
Description High Purity Aluminum
Grade Setting Up Sample
UNS

Ag	(<0.5)*	Na	(0.043)*
Al		Nb	(<0.05)*
As	(0.13)*	Nd	(0.38)*
Au	(<0.5)*	Ni	(1.3)*
B	(8.1)*	O	
Be	(<0.05)*	P	(11.5)*
Bi	(<0.01)*	Pb	(0.19)*
C		Pd	(<0.5)*
Ca	(0.08)*	Pr	(0.08)*
Cd	(<0.5)*	Pt	(<0.05)*
Ce	(2)*	Re	(<0.05)*
Co	(0.08)*	Rh	(<0.2)*
Cr	(0.28)*	Ru	(<0.05)*
Cu	(28)*	S	
Fe	(38)*	Sb	(0.1)*
Ga	(3.7)*	Se	(<0.5)*
Gd	(0.08)*	Si	(27)*
Ge	(<0.2)*	Sn	(<0.5)*
H		Sr	(<0.005)*
Hf	(<0.05)*	Ta	(<5)*
Hg	(<0.1)*	Te	(<0.05)*
In	(<0.1)*	Ti	(2.4)*
Ir	(<0.01)*	Tl	(0.06)*
La	(1.3)*	V	(6)*
Li	(<0.05)*	W	(0.058)*
Mg	(8.1)*	Y	(0.05)*
Mn	(2.8)*	Zn	(3.8)*
Mo	(<0.1)*	Zr	(1)*
N			

Name IARM-220G
Description QA 10 - SUS
Grade Setting Up Sample
UNS

Ag	(<0.00001)	Na	(0.00003)
Al		Nb	
As	(0.000012)	Nd	
Au		Ni	
B	(0.00057)	O	
Be	(<0.00001)	P	(0.0006)
Bi	(<0.00001)	Pb	(0.000015)
C		Pd	
Ca	(0.00001)	Pr	
Cd	(<0.00001)	Pt	
Ce		Re	
Co	(<0.00001)	Rh	
Cr		Ru	
Cu		S	
Fe		Sb	(0.00001)
Ga	(0.00014)	Se	
Gd		Si	
Ge		Sn	(<0.00001)
H		Sr	
Hf		Ta	
Hg		Te	
In	(<0.00001)	Ti	
Ir		Tl	
La	(0.00026)	V	(0.00052)
Li		W	
Mg	(0.00087)	Y	
Mn		Zn	
Mo	(0.000015)	Zr	(0.000088)
N			

Name IARM-221B
Description QA 11 - SUS
Grade Setting Up Sample
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be	(0.005)	P	
Bi		Pb	
C		Pd	
Ca	(0.03)	Pr	
Cd		Pt	
Ce		Re	
Co	(0.2)	Rh	
Cr	(0.2)	Ru	
Cu	(0.6)	S	
Fe	(0.2)	Sb	(0.01)
Ga	(0.03)	Se	
Gd		Si	(0.2)
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.1)
Ir		Tl	
La		V	
Li		W	
Mg	(4.8)	Y	
Mn	(0.4)	Zn	(6.8)
Mo		Zr	
N			

Name IARM-221C
Description QA 11 - SUS
Grade Setting Up Sample
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be	(0.005)	P	
Bi		Pb	
C		Pd	
Ca	(0.03)	Pr	
Cd		Pt	
Ce		Re	
Co	(0.2)	Rh	
Cr	(0.2)	Ru	
Cu	(0.6)	S	
Fe	(0.2)	Sb	(0.01)
Ga	(0.03)	Se	
Gd		Si	(0.2)
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.1)
Ir		Tl	
La		V	
Li		W	
Mg	(4.8)	Y	
Mn	(0.4)	Zn	(6.8)
Mo		Zr	
N			

Name IARM-221D
Description QA 11 - SUS
Grade Setting Up Sample
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be	(0.005)	P	
Bi		Pb	
C		Pd	
Ca	(0.03)	Pr	
Cd		Pt	
Ce		Re	
Co	(0.2)	Rh	
Cr	(0.2)	Ru	
Cu	(0.6)	S	
Fe	(0.2)	Sb	
Ga	(0.03)	Se	
Gd		Si	(0.2)
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	(0.1)
Ir		Tl	
La		V	
Li		W	
Mg	(4.8)	Y	
Mn	(0.4)	Zn	(6.8)
Mo		Zr	
N			

* Results listed in ug/g

Set-Up Samples

Name MBH-164X ALSUS7
Description
Grade Setting Up Sample
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	1.1
B		O	
Be	0.1	P	
Bi		Pb	0.11
C		Pd	
Ca	<0.001	Pr	
Cd		Pt	
Ce		Re	
Co	0.2	Rh	
Cr	0.01	Ru	
Cu	4	S	
Fe	0.55	Sb	0.12
Ga		Se	
Gd		Si	0.9
Ge		Sn	0.01
H		Sr	0.003
Hf		Ta	
Hg		Te	
In		Ti	0.3
Ir		Tl	
La		V	
Li		W	
Mg	0.15	Y	
Mn	0.06	Zn	0.12
Mo		Zr	0.18
N			

Name MBH-164X ALSUS8
Description
Grade Setting Up Sample
UNS

Ag	0.09	Na	
Al		Nb	
As		Nd	
Au		Ni	0.12
B		O	
Be	0.015	P	
Bi		Pb	0.001
C		Pd	
Ca	<0.001	Pr	
Cd		Pt	
Ce		Re	
Co	0.025	Rh	
Cr	0.06	Ru	
Cu	0.75	S	
Fe	0.25	Sb	0.03
Ga		Se	
Gd		Si	9.5
Ge		Sn	0.13
H		Sr	0.07
Hf		Ta	
Hg		Te	
In		Ti	0.02
Ir		Tl	
La		V	
Li		W	
Mg	0.9	Y	
Mn	0.45	Zn	0.25
Mo		Zr	0.025
N			

Name MBH-RA18-20
Description
Grade Setting Up Sample
UNS

Ag	(0.055)	Na	
Al	(73.7)	Nb	
As		Nd	
Au		Ni	(2.60)
B	(0.005)	O	
Be	(0.0004)	P	
Bi		Pb	(0.33)
C		Pd	
Ca	(0.010)	Pr	
Cd	(0.002)	Pt	
Ce		Re	
Co	(0.022)	Rh	
Cr	(0.017)	Ru	
Cu	(6.7)	S	
Fe	(0.30)	Sb	(0.41)
Ga	(0.004)	Se	
Gd		Si	(14.0)
Ge		Sn	(0.38)
H		Sr	(0.043)
Hf		Ta	
Hg		Te	
In		Ti	(0.018)
Ir		Tl	
La		V	(0.015)
Li	(0.0003)	W	
Mg	(0.41)	Y	
Mn	(0.33)	Zn	(0.65)
Mo		Zr	(0.015)
N			

Name MBH-165X ALB1 SUS
Description Copper Alloy
Grade Setting Up Sample
UNS

Ag		Na	
Al	9	Nb	
As	0.005	Nd	
Au		Ni	5.3
B		O	
Be		P	0.015
Bi	0.015	Pb	0.2
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr	0.01	Ru	
Cu	82	S	
Fe	2.8	Sb	
Ga		Se	
Gd		Si	0.1
Ge		Sn	0.03
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg	0.04	Y	
Mn	0.08	Zn	0.06
Mo		Zr	
N			

Name MBH-165X MNB5 SUS
Description Copper Alloy
Grade Setting Up Sample
UNS

Ag		Na	
Al	3.2	Nb	
As		Nd	
Au		Ni	1.1
B		O	
Be		P	
Bi		Pb	0.2
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	55	S	
Fe	0.55	Sb	
Ga		Se	
Gd		Si	0.4
Ge		Sn	1.6
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	0.2	Zn	38
Mo		Zr	
N			

Set-Up Samples

Name MBH-165X PB10 SUS
Description Copper Alloy
Grade Setting Up Sample
UNS

Ag		Na	
Al	0.001	Nb	
As	0.02	Nd	
Au		Ni	0.06
B		O	
Be		P	0.002
Bi	0.02	Pb	0.04
C		Pd	
Ca		Pr	
Cd		Pt	
Ce		Re	
Co	0.01	Rh	
Cr	0.001	Ru	
Cu	89	S	0.03
Fe	0.002	Sb	0.15
Ga		Se	0.01
Gd		Si	0.001
Ge		Sn	11
H		Sr	
Hf		Ta	
Hg		Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn	(<0.001)	Zn	0.05
Mo		Zr	
N			

Name MBH-RE12-20
Description High Purity Iron
Grade Setting Up Sample
UNS

Ag	(<0.1)*	Na	(<0.03)*
Al	(12)*	Nb	(0.3)*
As	(21)*	Nd	(<0.01)*
Au	(<0.1)*	Ni	(42)*
B	(0.3)*	O	(115)*
Be	(<0.005)*	P	(35)*
Bi	(<0.05)*	Pb	(0.1)*
C	(53)*	Pd	(<0.1)*
Ca	(<0.1)*	Pr	(<0.01)*
Cd	(<0.5)*	Pt	(<0.1)*
Ce	(<0.05)*	Re	(<0.01)*
Co	(16)*	Rh	(<0.1)*
Cr	(69)*	Ru	(<0.1)*
Cu	(65)*	S	(33)*
Fe		Sb	(2.8)*
Ga	(4.7)*	Se	(<2)*
Gd	(<0.01)*	Si	(36)*
Ge	(5.6)*	Sn	(3)*
H		Sr	(<5)*
Hf	(<0.01)*	Ta	(<0.01)*
Hg	(<0.1)*	Te	(<0.01)*
In	(<0.1)*	Ti	(0.22)*
Ir	(<0.05)*	Tl	(<0.05)*
La	(<0.01)*	V	(0.8)*
Li	(<0.005)*	W	(0.22)*
Mg	(0.4)*	Y	(<5)*
Mn	(216)*	Zn	(5.7)*
Mo	(10)*	Zr	(<0.05)*
N	(18)*		

* Results listed in ug/g

Name MBH-168X PBSUS1 D
Description Lead
Grade Setting Up Sample
UNS

Ag	0.01	Na	
Al		Nb	
As	0.37	Nd	
Au	0.001	Ni	0.003
B		O	
Be		P	
Bi	0.04	Pb	
C		Pd	
Ca		Pr	
Cd	0.015	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.03	S	0.002
Fe	0.002	Sb	6.2
Ga		Se	0.01
Gd		Si	
Ge		Sn	1.3
H		Sr	
Hf		Ta	
Hg		Te	0.01
In	0.01	Ti	
Ir		Tl	0.001
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.001
Mo		Zr	
N			

Name MBH-168X PBSUS5
Description Lead
Grade Setting Up Sample
UNS

Ag	0.2	Na	
Al		Nb	
As	0.35	Nd	
Au	0.0005	Ni	0.001
B		O	
Be		P	
Bi	0.35	Pb	
C		Pd	
Ca		Pr	
Cd	0.09	Pt	
Ce		Re	
Co		Rh	
Cr		Ru	
Cu	0.06	S	0.0005
Fe	(<0.001)	Sb	0.35
Ga		Se	
Gd		Si	
Ge		Sn	0.9
H		Sr	
Hf		Ta	
Hg	0.02	Te	0.003
In	0.08	Ti	
Ir		Tl	0.002
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-168X PBSUS PM1 B
Description Lead for fire assay
Grade Setting Up Sample
UNS

Ag	0.004	Na	
Al		Nb	
As	0.0002	Nd	
Au	0.0035	Ni	0.0003
B		O	
Be		P	
Bi	0.01	Pb	
C		Pd	0.002
Ca		Pr	
Cd		Pt	0.0055
Ce		Re	
Co		Rh	0.0012
Cr		Ru	0.00001
Cu	0.0005	S	0.0002
Fe	0.0001	Sb	0.0001
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	0.0001
In		Ti	
Ir	0.0002	Tl	0.001
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	0.18
N			

Set-Up Samples

Name MBH-1611X SNSUS6
Description Tin
Grade Setting Up Sample
UNS

Name MBH-1611X SNSUS7
Description Tin
Grade Setting Up Sample
UNS

Name MBH-41X ZSC1 A
Description RoHS Monitors
Grade
UNS

Name MBH-41X ZSC3 A
Description RoHS Monitors
Grade
UNS

Name MBH-41X ZSC4 A
Description RoHS Monitors
Grade
UNS

Ag	0.1	Na	
Al		Nb	
As	0.3	Nd	
Au	0.001	Ni	0.03
B		O	
Be		P	
Bi	0.08	Pb	1
C		Pd	
Ca		Pr	
Cd	0.01	Pt	
Ce		Re	
Co	0.02	Rh	
Cr		Ru	
Cu	0.4	S	
Fe	0.03	Sb	0.15
Ga		Se	0.003
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg		Te	0.001
In	0.005	Ti	
Ir		Tl	0.005
La		V	
Li		W	
Mg		Y	
Mn		Zn	0.005
Mo		Zr	0.025
N			

Ag	0.15	Na	
Al	(<0.001)	Nb	
As	1.9	Nd	
Au	0.005	Ni	0.09
B		O	
Be		P	
Bi	2.4	Pb	0.35
C		Pd	
Ca		Pr	
Cd	0.02	Pt	
Ce		Re	
Co	0.01	Rh	
Cr		Ru	
Cu	11	S	
Fe	(0.06)	Sb	11
Ga		Se	0.005
Gd		Si	
Ge	0.002	Sn	
H		Sr	
Hf		Ta	
Hg		Te	0.005
In	0.05	Ti	
Ir		Tl	0.025
La		V	
Li		W	
Mg		Y	
Mn		Zn	(0.001)
Mo		Zr	(0.015)
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.0621
C		Pd	
Ca		Pr	
Cd	0.0288	Pt	
Ce		Re	
Co		Rh	
Cr	0.0039	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.026	Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.0273
C		Pd	
Ca		Pr	
Cd	0.119	Pt	
Ce		Re	
Co		Rh	
Cr	0.0148	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.0021	Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.156
C		Pd	
Ca		Pr	
Cd	0.0131	Pt	
Ce		Re	
Co		Rh	
Cr	0.0299	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.05	Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Set-Up Samples

Name MBH-4IX ZSC6 A
Description RoHS Monitors
Grade
UNS

Ag		Na	
Al		Nb	
As		Nd	
Au		Ni	
B		O	
Be		P	
Bi		Pb	0.0077
C		Pd	
Ca		Pr	
Cd	0.215	Pt	
Ce		Re	
Co		Rh	
Cr	<0.0002	Ru	
Cu		S	
Fe		Sb	
Ga		Se	
Gd		Si	
Ge		Sn	
H		Sr	
Hf		Ta	
Hg	0.029	Te	
In		Ti	
Ir		Tl	
La		V	
Li		W	
Mg		Y	
Mn		Zn	
Mo		Zr	
N			

Name MBH-169X ZNSUS1
Description Zinc
Grade Setting Up Sample
UNS

Ag	0.04	Na	
Al	0.35	Nb	
As		Nd	
Au		Ni	0.06
B		O	
Be		P	
Bi	0.005	Pb	0.6
C		Pd	
Ca		Pr	
Cd	0.3	Pt	
Ce		Re	
Co		Rh	
Cr	0.001	Ru	
Cu	0.35	S	
Fe	0.05	Sb	0.2
Ga		Se	
Gd		Si	0.003
Ge		Sn	0.3
H		Sr	
Hf		Ta	
Hg		Te	
In	0.25	Ti	0.001
Ir		Tl	0.06
La		V	
Li		W	
Mg	0.002	Y	
Mn	0.001	Zn	
Mo		Zr	
N			

Name MBH-169X ZNSUS1
Description Zinc
Grade Setting Up Sample
UNS

Ag	0.04	Na	
Al	0.35	Nb	
As		Nd	
Au		Ni	0.06
B		O	
Be		P	
Bi	0.005	Pb	0.6
C		Pd	
Ca		Pr	
Cd	0.3	Pt	
Ce		Re	
Co		Rh	
Cr	0.001	Ru	
Cu	0.35	S	
Fe	0.05	Sb	0.2
Ga		Se	
Gd		Si	0.003
Ge		Sn	0.3
H		Sr	
Hf		Ta	
Hg		Te	
In	0.25	Ti	0.001
Ir		Tl	0.06
La		V	
Li		W	
Mg	0.002	Y	
Mn	0.001	Zn	
Mo		Zr	
N			



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We leverage an extensive distributor network where there is no sales office represented.

* Indicates a Centre of Excellence