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**CRM PURITY COPPER DISCS AND RODS**

listed in mg/kg IMN in SETS only, as grouped IMN CS: 40mm Ø x 25mm or 6mm Ø x 100mm VS: ~40-45mm Ø x ~18-25mm

Number	Ag	As	Bi	Cd	Co	Cr	Fe	Mn	Ni	P	Pb	S	Sb	Se	Si	Sn	Te	Zn	Other
AVAILABLE INDIVIDUALLY																			
VS M04-K3	299	310	124	285	98	115	419	296	551	261	495	70	332	287	93	489	289	293	
VS M04-K2.2	51.5	54.4	33.0	29.2	31.8	23.7	48.3	35.2	59.8	41.1	54.8	34	42.6	37.7	29.7	43	40	50.4	
VS M04-K2.1	50.9	51.9	32.8	29.2	28.2	30.5	56.8	55.1	72.2	41.9	50.3	41	45.9	62.6	.	55	34.9	49.1	
VS M04-7	50.7	50.5	27.6	26.5	30.6	41.3	84.8	53.0	75.6	39.0	26.8	36.6	60.8	.	13.3	45.4	27.0	68.1	
AVAILABLE INDIVIDUALLY EXCEPT CS3 WHICH IS SET ONLY																			
IMN CS1	53.0	2.3	1.1	1.0	0.6	(0.3)	18.4	29.0	46.8	57.7	60.5	65.9	3.0	62	(3.0)	52.9	2.1	24.1	B:(1.6) <b>17034</b>
IMN CS2	45.6	7.9	6.2	7.4	3.8	35.8	30.5	35.3	26.6	33.8	38.6	44.9	7.5	39.5	(9.4)	33.6	5.6	8.9	B:(3.1) <b>17034</b>
IMN CS3	38.9	13.8	12.2	13.4	7.4	10.9	28.3	12.6	11.1	12.1	13.3	18.8	13.0	15.4	(22.2)	13.3	10.6	31.3	B:(4.2) <b>17034</b>
IMN CS4	237.0	42.2	39.6	35.5	24.3	7.0	82.0	8.3	7.1	6.3	7.6	41.3	36.8	6.7	(46.5)	6.2	32.9	44.0	B:(21.7) <b>17034</b>
IMN CS5	320.0	70.5	59.7	66.1	37.5	1.1	90.9	4.2	4.4	2.0	5.0	12.0	63.9	0.9	(54.7)	0.85	49.9	101	B:(35.2) <b>17034</b>
Number	Ag	As	Bi	Cd	Co	Cr	Fe	Mn	Ni	P	Pb	S	Sb	Se	Si	Sn	Te	Zn	Other

**CRM ELECTROLYTIC COPPER ROD SET**

available in SET/6 ONLY listed in mg/kg 3 or 6 mm Ø x 100 mm

Number	Ag	As	Bi	Fe	Ni	Pb	Sb	Sn	Zn	Cu
IMN CF1	45.0	6.7	12.5	42.0	29.0	33.0	24.0	21.0	57.0	Rem
IMN CF2	9.0	1.1	.	2.8	0.7	0.6	1.4	.	2.2	Rem
IMN CF3	3.2	1.8	.	20.0	6.4	8.9	2.2	3.2	3.4	Rem
IMN CF4	18.0	43.0	1.2	3.7	7.8	1.1	11.0	1.0	31.0	Rem
IMN CF5	12.0	2.3	0.25	98.0	3.0	3.2	1.9	1.3	4.7	Rem
IMN CF6	12.0	0.32	(0.012)	1.0	(0.4)	1.8	0.2	(0.06)	.	Rem

**CRM COPPER**

Number	O %	Fe mg/kg	P mg/kg	Sn mg/kg	Units
BAM 391	.	0.90	3.3	(<0.1)	40 mm Ø x 30 mm
BAM 390	.	0.79	1.3	(<0.1)	40 mm Ø x 30 mm
BAM 392	.	0.80	7.0	(<0.1)	40 mm Ø x 30 mm
BAM M380	0.386	.	.	.	38 mm Ø x 25 mm

**COPPER WIRE FOR GLOBULE ARC WORK**

analysis listed in mg/kg wire form, intended for globule arc work C1C: CRM all others: RM 5 rods 3 mm Ø x 80 mm

Number	Ag	As	Bi	Cd	Co	Cr	Fe	Mn	Ni	Pb	Sb	Se	Sn	Te	Zn	O	P	S	Si
38X C1B	13	0.8	0.1	<0.01	0.03	0.06	1.2	1.2	1.0	0.8	0.6	.	<0.3	0.3	0.45	.	.	.	last
38X C1C	11	0.19	0.10	<0.01	.	<0.005	1.7	(0.005)	0.27	(0.05)	0.10	(0.25)	(0.01)	(0.21)	<0.1	266	<0.05	2.0	<0.1

**CHILL CAST PHOSPHORUS DEOXIDIZED COPPER**

# = Class, where 1 = CRM and 2 = RM, typical analysis

#	Number	P	Cu	Ag	Fe	Al	As	Co	Mn	Ni	Pb	Sb	Sn	Zn
2	CURM 09.01	0.151	99.82	0.011	0.0019	<0.0005	<0.001	<0.0003	<0.0003	<0.0003	<0.0005	<0.0005	<0.001	0.0008
2	CURM 09.02	0.078	99.90	0.0055	0.0042	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001
1	SRM C1253a	0.0561	99.46	0.0494	0.0290	0.0176	0.0436	0.0454	0.0357	0.0491	0.0243	0.0139	0.0499	0.0329
1	SRM C1251a	0.0420	99.89	0.0080	0.0285	(<0.0020)	0.0016	0.00132	0.00046	0.00236	0.00235	0.00149	0.0016	0.0024
1	SRM C1252a	0.0125	99.87	0.0158	0.0072	(<0.0020)	0.0118	0.0087	0.0043	0.0128	0.0060	0.0042	0.0120	0.00694

Number	Au	Bi	Cd	Cr	Mg	S	Se	Si	Te	Units
CURM 09.01	.	<0.0003	.	.	.	.	.	<0.001	.	50 mm Ø x 10-12 mm
CURM 09.02	.	<0.0005	.	.	.	.	.	<0.002	.	50 mm Ø x 10-12 mm
SRM C1253a	0.0072	(0.0056)	0.0070	0.0260	(0.0150)	(0.0050)	0.0136	(0.0580)	0.0168	32 mm x 32 mm x 19 mm
SRM C1251a	0.00155	0.00037	(<0.0003)	(0.0003)	(<0.0020)	(0.0035)	0.0011	(<0.0050)	0.0016	32 mm x 32 mm x 19 mm
SRM C1252a	0.00339	(0.0019)	0.00169	0.0019	(<0.0020)	(0.0070)	0.0056	(<0.0100)	0.00546	32 mm x 32 mm x 19 mm

**CRM COPPER IN VARIOUS FORMS**

analysis listed in mg/kg each of the blow available in 3 forms A: disc 39 mm Ø x 30 mm B: Rod 8 mm Ø x 100 mm C: Chips 50 g

Number	Ag	Al	As	Au	Be	Bi	Cd	Co	Cr	Fe	In	Mg	Mn	Ni	P	Pb	S	Sb	Se	Si	Sn	Te	Ti	Zn	Zr
ERM-EB075	10.8	2.3	3.18	1.46	1.08	1.79	2.69	2.64	1.4	9.3	1.83	7.0	1.35	2.18	2.59	4.8	25	2.93	1.69	2.6	2.13	1.78	3.2	6.51	.
ERM-EB074	1.03	.	1.23	0.52	0.31	0.51	0.4	0.83	0.37	5.8	0.49	2.03	0.93	0.61	1.53	2.7	(3.3)	0.57	0.55	.	(1.5)	0.5	0.97	2.2	(8.8)

COPPER

# = class, where 1 = CRM and 2 = RM  
 39X: ~38-42 mm Ø x ~15-20 mm BS: 38 mm Ø x ~7 or 19+ mm IARM: 31 mm Ø x 2 or 18 mm  
 BAM, BCR, ERM: 38-40 mm Ø x 27-30 mm CTIF: 40 mm Ø x 18 mm IMN, VS: 40 mm Ø x 23-27 mm

#	Number	Al	As	Bi	Cd	Co	Cr	Fe	Mg	Mn	Ni	P	Pb	S
1	IMN CCD6	1.076	.	0.00960	0.0469	0.1966	.	0.853	.	.	0.532	(0.048)	0.1109	.
1	IMN CCD5	0.521	.	0.0093	0.0328	0.1499	.	0.331	.	.	0.329	(0.031)	1.68	.
1	IMN CCD3	0.252	.	0.00368	0.00910	0.0318	.	0.0332	.	.	0.0639	(0.045)	3.28	.
1	IMN CCD4	0.0893	.	0.0182	0.01786	0.0840	.	4.61	.	.	0.00476	(0.11)	0.0674	.
1	IMN CCD2	0.0380	.	0.00120	0.00474	0.0168	.	2.17	.	.	0.0222	(0.053)	0.66	.
1	BAM M376b	0.0158	0.0198	0.0239	0.0215	0.0249	0.0433	0.0231	0.0298	0.0195	0.0201	0.0193	0.0230	0.0121
1	39X 17871D	0.0150	.	0.052	0.0027	.	.	0.0019	.	.	0.0412	0.020	0.050	0.0052
1	39X 17870AJ	0.0047	0.0056	0.0476	0.0029	0.0042	0.0009	0.0416	0.020	0.0387	0.0079	0.0203	0.047	0.0037
1	39X 17866AH	0.0028	0.0435	0.0109	0.0410	0.0273	0.0316	0.0075	0.0041	0.0147	0.0511	0.0125	0.0501	0.052
1	BAM M386a	0.00269	0.00208	0.00095	0.00054	0.00049	0.00115	0.00593	0.00767	0.00111	0.00211	0.00065	0.00198	0.00159
1	MP 3.00262	(0.0022)	0.0013	0.0009	(0.0007)	(0.0008)	(0.0004)	0.0022	.	(0.0002)	(0.001)	(0.0003)	0.006	0.0010
1	BS Cu997	(0.002)	(0.0008)	.	.	(0.001)	(0.0003)	0.0032	(0.0005)	(0.001)	0.0004	0.0055	0.0008	(0.006)
1	BAM 370	0.00126	.	.	.	.	.	.	.	.	.	0.00117	0.0016	.
1	39X 17867AE	0.0012	0.039	0.012	0.0061	0.0126	.	0.0097	0.0053	0.0016	0.0394	0.0242	0.0097	0.024
1	BAM M385b	0.00111	0.00109	0.00068	0.00048	0.00096	0.00113	0.00554	.	0.00118	0.00128	0.00146	.	0.00353
1	BAM M383d	0.00102	<0.0001	0.000082	0.000062	0.000130	0.000077	0.00224	0.00017	0.000097	0.00047	<0.0001	0.00078	0.00035
1	BS 110C	(0.0009)	(0.0001)	.	.	(0.001)	(0.0004)	(0.002)	(0.0005)	(0.0004)	(0.0005)	0.0016	(0.0003)	0.0008
1	BS 14500a	(0.0007)	.	Ca: (0.0004)	N: (0.0006)	(0.0005)	(0.001)	(0.00006)	(0.0004)	(0.0004)	0.0026	0.010	0.0031	0.035
1	BS 14500	(<0.0006)	(<0.0005)	.	.	(<0.0001)	(<0.0001)	0.0041	(<0.0003)	0.00004	(<0.0003)	0.0075	0.0008	0.0033
1	IMN CCD1	(0.00039)	.	(0.00031)	0.00115	0.00096	.	0.0116	.	.	0.1038	(0.033)	0.0063	.
1	BAM M384c	<0.0002	0.00029	0.00038	0.00050	0.00040	(0.00047)	0.00330	0.00018	0.00057	0.00057	<0.0001	0.00072	0.00040
1	BAM M382a	<0.0002	0.000073	0.000075	0.000050	0.000092	(0.00024)	0.00103	0.00019	0.00025	0.00027	<0.0002	0.00022	0.00067
1	39X 27866A	.	0.0383	0.0047	0.0139	0.0308	0.0012	0.0030	.	.	0.0487	0.0147	0.0054	0.0469
1	39X 27869A	.	0.0098	0.0376	0.0028	0.0036	(0.0002)	0.0030	.	.	0.0190	0.0119	0.0225	0.0112
1	IMN CS5	.	0.00705	0.00597	0.00661	0.00375	0.00010	0.00909	.	0.00043	0.00044	0.00020	0.00050	0.00120
1	IMN CS4	.	0.00422	0.00396	0.00355	0.00243	0.00070	0.00820	.	0.00083	0.00072	0.00063	0.00076	0.00413
1	IARM Cu101-18	.	0.00015	0.00005	.	.	.	0.00030	.	0.00003	0.00027	.	0.00012	0.00050
1	IARM Cu110-18	.	0.00013	.	.	.	(0.00009)	0.00034	0.00010	0.00006	(0.00006)	0.00160	(0.00005)	0.00060
1	BAM 372	.	0.00103	.	0.000163	.	.	.	.	0.00114	0.0012	.	.	.
1	IMN CS2	.	0.00074	0.00062	0.00074	0.00036	0.00358	0.00305	.	0.00353	0.00267	0.00338	0.00386	0.00449
1	IMN CS1	.	0.00020	0.00011	0.00010	0.00006	(0.00003)	0.00184	.	0.00290	0.00468	0.00577	0.00605	0.00659
1	IMN CS7 D	.	0.00009	<0.00005	(0.000002)	0.000009	0.00197	0.00049	.	0.00022	0.00044	(0.00024)	(0.00009)	0.00070
1	IMN CS6	.	0.00002	<0.00005	(0.000006)	(0.00002)	0.00002	0.00208	.	0.00007	0.00008	(0.00015)	(0.00004)	0.00054
1	BAM 369	.	.	0.00097	.	0.00104	0.00092	.	0.00036	.	.	.	.	.
1	BAM 371	.	.	.	.	.	.	0.0018	.	.	.	.	.	0.0013

#	Number	Al	As	Bi	Cd	Co	Cr	Fe	Mg	Mn	Ni	P	Pb	S
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continued analysis listed in mass % except \* which is mg/kg

Number	Sb	Se	Si	Sn	Te	Ti	Zn	Zr	Ag*	Au*	C*	Be*	Cu	In*	O*	Other
IMN CCD6	0.2019	.	.	0.547	.	.	0.320	.	512	.	.	.	.	.	.	.
IMN CCD5	0.131	.	.	1.072	.	.	0.0841	.	313	.	.	.	.	.	.	.
IMN CCD3	0.01886	.	.	0.258	.	.	1.61	.	598	.	.	.	.	.	.	.
IMN CCD4	0.0791	.	.	0.1090	.	.	0.1565	.	1528	.	.	.	.	.	.	.
IMN CCD2	0.00479	.	.	0.0552	.	.	0.756	.	208	.	.	.	.	.	.	.
BAM M376b	0.0193	0.0205	(0.0011)	0.0239	0.0209	0.00039	0.0192	0.00243	152	.	.	3.7	.	.	.	.
39X 17871D	0.0141	0.0310	0.0014	0.105	0.0137	.	0.091	.	309	5	.	.	32	.	Ge*: (9)	
39X 17870AJ	0.0490	0.0111	0.0048	0.0100	0.040	.	0.0125	.	480	7	Ge: 0.0149	.	100	.	.	
39X 17866AH	0.0095	0.0053	0.0111	0.0614	0.0065	.	0.0840	.	86	(4)	Ge: 0.0052	.	97	.	last	
BAM M386a	0.00252	0.00097	(0.0012)	0.00216	0.00311	0.00347	0.00367	.	44.2	.	.	.	.	.	.	
MP 3.00262	0.0033	0.0016	(0.0029)	0.0017	(0.0018)	(0.0006)	(0.003)	.	10	(10)	.	99.97	44 mm Ø x 25 mm	.	.	
BS Cu997	(0.0002)	.	(0.0009)	0.0003	.	17025, 17034	0.0006	(0.007)	.	7	.	99.7	39	17025	.	
BAM 370	0.0015	.	(0.0019)	0.00165	.	.	.	.	.	.	.	.	.	.	.	
39X 17867AE	0.013	0.0061	0.0081	0.043	0.0072	B:0.0042	0.0381	.	148	11	Ge:0.0104	.	45	.	.	
BAM M385b	0.00150	0.00072	0.00113	0.00167	0.00092	.	0.00147	.	26.3	.	.	.	.	.	.	
BAM M383d	0.00018	(0.00006)	.	0.00038	0.000047	0.00012	0.000108	<0.0001	.	As*:1.20	.	.	.	.	.	
BS 110C	(0.0003)	.	(0.0009)	(0.0002)	.	17025, 17034	(0.004)	.	.	(20)	.	99.97	9	Ca*: (2)		
BS 14500a	(0.005)	.	(0.002)	0.0028	0.51	17025, 17034	0.0053	(0.001)	.	(30)	.	99.6	17	.		
BS 14500	(<0.001)	.	(<0.002)	0.0002	0.53	17025	0.004	.	(<2)	5	(<1)	99.4	7	last		
IMN CCD1	(0.00022)	.	.	0.00088	.	.	0.0101	.	153	.	.	.	.	.		
BAM M384c	0.00098	0.00029	.	0.00006	0.00061	<0.00002	0.00010	<0.00003	14.8	.	.	.	.	.		
BAM M382a	0.000087	0.000077	.	0.00047	0.000072	0.000057	0.00076	.	29	.	.	.	.	.		
39X 27866A	0.0052	0.0028	.	0.0448	0.0032	.	0.0287	.	57	16	.	.	437	Ge*: 29		
39X 27869A	0.0362	0.0127	.	0.0106	0.0153	.	0.0065	.	349	80	.	.	90	Ge*: 123		
IMN CS5	0.00639	0.00009	(0.00548)	0.00009	0.00498	.	0.0101	.	320	.	.	.	.	B*: (35.2)		
IMN CS4	0.00368	0.00067	(0.00465)	0.00062	0.00329	.	0.00440	.	237	.	.	.	.	B*: (21.7)		
IARM Cu101-18	0.00014	.	.	0.00020	.	.	0.00008	.	13.0	.	.	.	.	.		
IARM Cu110-18	.	(0.00020)	.	(0.00020)	.	.	0.00010	.	13.0	(18)	.	.	10.0	.		
BAM 372	.	0.00076	.	.	.	.	.	.	.	.	.	.	.	.		
IMN CS2	0.00075	0.00390	(0.00094)	0.00337	0.00056	.	0.00089	.	45.6	.	.	.	.	B*: (2.8)		
IMN CS1	0.00030	0.00615	(0.00030)	0.00529	0.00021	.	0.00241	.	53.1	.	.	.	.	B*: (1.1)		
IMN CS7 D	0.00010	<0.00010	<0.00010	0.00005	<0.000005	.	.	.	13.7	.	.	.	.	B*: <0.5		
IMN CS6	0.00010	<0.00010	.	0.00106	<0.000005	.	0.00014	.	85	.	.	.	.	B*: <0.5		
BAM 369	.	.	.	.	.	.	0.0022	.	.	.	.	.	.	.		
BAM 371	.	.	.	.	0.0014	0.00132	.	.	.	.	.	11.5	.	.		

Number	Sb	Se	Si	Sn	Te	Ti	Zn	Zr	Ag*	Au*	C*	Be*	Cu	In*	O*	Other
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CRM	COPPER RODS																		
	analysis listed in mg/kg										IMN: 6 mm Ø x 100 mm				SRM: ~6.5 mm Ø x 103 mm				
Number	Ag	As	Bi	Cd	Co	Cr	Fe	Mn	Ni	O	P	Pb	S	Sb	Se	Sn	Te	Zn	Cu
SRM 494	50	2.6	0.35	.	0.5	2.0	.	3.7	11.7	.	.	26.5	15	4.5	2.00	70	0.58	400	99.91
IMN CS7R	13.7	0.9	<0.5	(0.02)	0.09	19.7	4.9	2.2	4.4	.	(2.4)	(0.9)	7.0	1.0	<1.0	0.5	<0.05	.	.
SRM 495	12.2	1.6	0.50	.	.	6.0	.	5.3	5.4	.	.	3.2	13	8.0	0.63	1.5	0.32	12	99.94
SRM 457	8.086	<2)	0.22	<1)	0.227	<2)	2.4	<0.1)	0.67	367	.	0.512	4	0.214	4.05	<0.1)	0.296	<3)	99.97

SRM 457 also contains Au:<0.05), Cd Si and Ti:<1) IMN CS7R also contains B:<0.5 and Si:<1.0

### BERYLLIUM ALLOY

# = class, where 1 = CRM and 2 = RM

17025, 17034

#	Number	Be	Co	Ag	Al	Cr	Cu	Fe	Ni	Pb	Si	Sn	Zn	Alloy	Notes
2	CTIF CuBeCo1	3.31	0.192	.	0.034	(0.017)	(94.5)	0.214	1.51	0.0368	(0.35)	0.025	0.0984		Typical Analysis
2	CTIF 4868	2.92	0.246	.	0.044	.	96.15	0.203	0.038	0.023	0.211	0.022	0.056		Typical Analysis
2	CTIF 4584	2.53	0.04	.	0.033	.	97.05	0.120	0.015	(0.002)	0.166	0.022	0.022		Typical Analysis
2	CTIF 4872	1.93	0.400	.	0.059	(0.04)	97.00	0.107	0.103	0.019	0.16	0.044	0.119	172	Typical Analysis
2	BS 172Be-1	1.89	0.206	.	(0.02)	0.0032	97.68	0.052	0.039	(0.002)	0.055	0.033	0.0070	172	last of stock
1	IARM Cu172-19	1.89	0.0017	0.0011	0.032	0.0017	(97.6)	0.071	0.237	.	0.045	0.0007	.	172	
1	36X CBC4E	1.869	0.215	.	0.0258	.	97.47	0.0274	0.0080	0.329	0.048	0.002	0.003	173	
1	36X CBC3D	1.840	0.209	.	0.019	.	97.77	0.046	0.007	0.0025	0.039	0.0021	0.004		
1	<b>BS 172Be-2</b>	1.83	(0.06)	.	0.032	0.015	97.7	0.127	0.165	0.041	(0.029)	0.015	0.0057	172	<b>17025</b>
2	CTIF 4766	1.58	0.64	.	0.027	(0.2)	96.83	0.165	0.203	0.053	0.11	0.100	0.070		Typical Analysis
2	CTIF CuBeCo6	1.5	(1.90)	1.37	0.135	0.0576	93.09	0.12	(1.45)	0.0397	0.26	0.0135	0.0330		
2	CTIF 4583	0.84	(0.002)	.	0.029	.	96.35	(0.15)	2.02	0.084	0.08	0.25	0.094		Typical Analysis
1	36X CBC6A	0.507	1.045	0.0015	0.0490	.	97.11	0.0243	1.132	0.0014	0.0263	0.0041	0.0010		
2	CTIF CuBeCo4	0.44	1.56	0.468	0.131	0.011	(96.2)	0.0138	0.905	0.0716	(0.05)	0.095	0.061		
1	36X CBC2F	0.439	2.22	0.0013	0.0097	.	97.15	0.0076	0.121	(0.0008)	0.0257	(0.0007)	0.0018		Typical Analysis
1	36X CBC5B	0.404	0.0084	0.0011	0.0104	.	97.61	0.0108	1.905	0.0015	0.004	0.0013	0.0010	175.1	
1	<b>BS 17510</b>	0.35	(0.024)	0.0014	0.042	(0.015)	97.6	0.042	1.70	0.0014	0.137	(0.004)	(0.005)	175.1	<b>17304</b>
2	CTIF 4873	0.10	0.86	.	0.069	0.080	98.60	0.135	0.050	(0.003)	0.071	(0.007)	(0.003)		Typical Analysis

w = wrought and c = cast; D = disc and M = mushroom

Number	As	C	Ca	Mg	Mn	O	P	S	Sb	Te	Zr	Form	Units
CTIF CuBeCo1	.	.	.	.	0.0303	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm
CTIF 4868	.	.	.	.	0.019	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm
CTIF 4584	.	.	.	.	(0.002)	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm
CTIF 4872	.	.	.	.	0.008	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm
BS 172Be-1	(0.001)	(0.001)	.	.	0.0010	.	0.003	<0.0002)	.	.	.	w	D 38 mm Ø x ~7 mm last
IARM Cu172-19	.	.	.	0.112	0.0019	.	0.0036	0.0010	0.0007	.	.		D ~38 mm Ø x ~3 or ~19 mm
36X CBC4E	.	.	.	0.0035	.	.	0.0027	.	.	.	.	w	D ~38 mm Ø x ~15 mm
36X CBC3D	.	.	.	0.0040	.	.	.	.	.	.	.	w	D 41 mm Ø x 15 mm
<b>BS 172Be-1</b>	(0.00014)	(0.002)	(0.0008)	(0.01)	0.0070	(0.0008)	0.0014	(0.0003)	.	last	(0.0003)	w	D 38 mm Ø x ~7 or ~10 mm
CTIF 4766	.	.	.	.	0.007	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm
CTIF CuBeCo6	.	.	.	.	0.0173	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm
CTIF 4583	.	.	.	.	0.064	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm
36X CBC6A	.	.	.	0.0070	.	.	0.0016	.	.	.	0.0553	w	D ~40 mm Ø x ~15 mm
CTIF CuBeCo4	.	.	.	.	0.0507	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm
36X CBC2F	.	.	.	0.0036	.	.	0.0067	.	.	.	(0.0006)	w	D ~40 mm Ø x ~15 mm
36X CBC5B	.	.	.	0.0009	.	.	.	.	.	.	.	w	D ~40 mm Ø x ~15 mm
<b>BS 17510</b>	<0.005	(0.003)	<0.005	(0.007)	0.0020	.	(0.005)	<0.05	0.0024	.	0.0011	c	D 38 mm Ø x ~7 or 19+ mm
CTIF 4873	.	.	.	.	(0.002)	.	.	.	.	.	.	c	M 60 mm Ø x 5 mm

### CHROMIUM COPPER

# = class, where 1 = CRM and 2 = RM

#	Number	Cr	Ag	Al	Fe	Mn	Ni	Pb	Si	Sn	Zn	Zr	Cu
1	IARM Cu182-18	1.09	0.0008	0.0031	0.041	0.0007	0.0007	0.0019	(0.09)	(0.002)	0.010	0.063	98.8
1	IARM Cu182-21	0.96	0.0012	(0.004)	0.021	0.0004	(0.0009)	(0.0004)	0.016	0.0004	0.0032	0.106	.
1	<b>BS 18150A</b>	0.79	.	0.0023	0.007	0.0010	0.0019	0.0011	0.027	0.0144	0.0006	0.203	[98.9]
1	<b>BS 18150</b>	0.74	.	0.0009	0.0047	0.0010	0.0010	0.0005	0.019	0.0097	0.0006	0.113	[99.1]
2	HRT CU2019	0.73	.	.	(0.005)	.	.	0.030	0.011	.	0.17	.	98.97
1	36X 274B	0.333	0.0016	0.0011	0.0165	0.0004	2.59	0.0011	0.645	(0.0008)	(0.0009)	.	96.44

Number	As	C	Co	Mg	N	O	P	S	Sb	Units
IARM Cu182-18	.	.	0.00013	0.0019	.	.	0.0012	0.0018	.	38 mm Ø x 3 or 19 mm
IARM Cu182-21	0.0009	0.0017	(0.0009)	0.0045	.	(0.0005)	0.0027	0.0010	(0.001)	38 mm Ø x 3 or 19 mm
<b>BS 18150A</b>	(0.0003)	0.0010	(0.0003)	.	.	(0.0008)	0.0045	0.0007	(0.0002)	38 mm Ø x ~7 mm <b>17025</b> last
<b>BS 18150</b>	(0.0004)	0.0009	(0.0002)	.	.	(0.0006)	0.0037	0.0007	(0.0001)	38 mm Ø x ~7 or 19+ mm <b>17025</b>
HRT CU2019	.	.	.	.	.	.	(0.005)	.	(0.006)	40 mm Ø x 20 mm
36X 274B	.	.	0.0042	.	.	.	0.0015	.	.	~40 mm Ø x ~15 mm

**Need a larger size?**  
**Most BS items are**  
**available in any height.**

**CRM CONVERTER COPPER DISC AND ROD SETS**

analysis listed in mass % AVAILABLE IN SETS ONLY, AS GROUPED 10 mm Ø x 100 mm

Number	Ag	As	B	Bi	Co	Cu	Fe	Ni	P	Pb	S	Sb	Se	Sn	Te	Zn
IMN CP1	0.057	0.32	0.024	0.010	0.051	.	0.17	0.40	0.002	0.013	0.054	0.33	0.002	0.24	0.053	0.20
IMN CP2	0.042	0.32	0.032	0.013	0.032	.	0.10	0.20	0.050	0.086	0.036	0.24	0.041	0.14	0.036	0.12
IMN CP3	0.026	0.11	0.00003	0.0007	0.013	.	0.082	0.12	0.038	0.31	0.012	0.11	0.018	0.070	0.022	0.11
IMN CP4	0.016	0.050	0.0042	0.0042	0.011	.	0.045	0.040	0.020	0.88	0.0060	0.040	0.011	0.028	0.011	0.046
IMN CP5	0.0062	0.0056	(0.011)	0.0011	0.0061	.	0.016	0.0095	0.0050	(1.48)	0.0024	0.010	0.0060	0.0070	0.0064	0.0098
IMN CH6	0.18	.	.	.	0.18	Rem	0.028	0.40	.	0.50	.	.	.	.	.	0.19
IMN CH7	0.40	.	.	.	0.11	Rem	0.11	0.18	.	1.01	.	.	.	.	.	0.047
IMN CH8	0.039	.	.	.	0.020	Rem	0.0012	0.036	.	1.49	.	.	.	.	.	0.077
IMN CH9	0.010	.	.	.	0.0060	Rem	0.0060	0.010	.	1.97	.	.	.	.	.	0.015
IMN CG1	0.011	.	.	.	0.17	Rem	0.013	0.036	.	0.60	.	.	.	.	.	0.016
IMN CG2	0.25	.	.	.	0.098	Rem	0.015	0.011	.	0.30	.	.	.	.	.	0.026
IMN CG3	0.040	.	.	.	0.045	Rem	0.030	0.39	.	0.22	.	.	.	.	.	0.14
IMN CG4	0.10	.	.	.	0.057	Rem	0.25	0.23	.	0.11	.	.	.	.	.	0.12
IMN CG5	0.41	.	.	.	0.0079	Rem	0.069	0.10	.	0.053	.	.	.	.	.	0.18

**CRM GILDING METAL**

Number	Cu	Fe	Ni	P	Pb	Sn	Zn	method	Units
SRM 1114	96.4	0.01	0.021	0.009	0.012	0.02	3.4	wrought	31 mm Ø x 19 mm
SRM 1113	95.0	0.04	0.057	0.008	0.026	0.06	4.8	wrought	31 mm Ø x 19 mm
SRM 1112	93.3	0.07	0.10	0.009	0.057	0.12	6.3	wrought	31 mm Ø x 19 mm

**CRM ISO 17034 GILDING METAL SET**

available individually or as a set wrought 40 mm Ø x 25 mm

Number	Ag	Al	As	Be	Bi	Cd	Cu	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Te	Zn
IMN MI1	0.00375	0.0401	0.0721	0.000091	0.000639	0.0229	95.709	0.2392	0.00305	0.00588	0.0271	0.00601	0.0467	0.00044	0.00315	0.1540	0.00647	3.53
IMN MI2	0.00899	0.0550	0.0539	0.00085	0.000558	0.01567	93.346	0.1483	0.00808	0.0178	0.0216	0.0157	0.0492	0.00189	0.0115	0.1021	0.0106	6.191
IMN MI3	0.0192	0.0146	0.0343	0.00193	0.00255	0.01125	91.46	0.0856	0.0345	0.0727	0.0150	0.0417	0.0230	.	0.0313	0.0663	0.00313	8.01
IMN MI4	0.0264	0.0080	0.00302	0.00658	0.00275	0.00539	88.35	0.0408	0.0497	0.1440	0.00733	0.0708	0.0120	0.000550	0.0601	0.0130	0.00213	11.13
IMN MI5	0.0321	0.00211	0.0152	0.00716	0.00429	0.00125	94.69	0.0149	0.0693	0.2520	0.00267	0.0961	0.00190	0.00957	0.0818	0.00404	.	4.44

**GUN METAL**

C, CURM: 50 mm Ø x 10 - 12 mm 33X GM29: wrought 33 mm Ø x 19 mm other 33X: chill cast ~40 mm Ø x ~15 mm

Number	Zn	Sn	Pb	Ni	Fe	Cu	Ag	Al	As	Bi	Co	Cr	Mn	P	S	Sb	Si
CRM																	
33X GM9A	13.81	2.93	6.91	0.710	0.090	75.1	0.0321	0.0052	0.0251	0.076	0.079	Cd:0.0072	.	0.0547	0.0153	0.184	(0.003)
33X GM4AD	5.90	3.02	5.27	1.482	0.0932	84.02	0.0206	0.0015	0.0228	0.0442	0.0077	.	0.00060	0.0034	0.034	0.0568	0.0010
33X GM8H	5.80	3.89	5.76	0.493	0.142	83.63	0.095	0.0052	0.0110	0.016	0.0151	0.0150	.	0.035	0.028	0.061	(0.003)
33X GM20B	1.80	4.49	0.294	0.211	0.44	89.49	0.200	0.133	0.300	0.044	0.0211	Cd:0.020	0.040	0.060	.	2.41	.
33X GM7K	1.363	10.07	1.79	0.531	0.0178	85.69	0.0682	.	0.095	0.098	0.100	.	.	0.0050	0.0613	0.111	Te:0.0112
RM	typical analysis																
CURM 71.33	3.60	4.96	6.84	0.938	0.018	83.60	<0.002	<0.001	<0.001	<0.002	.	<0.0005	<0.0005	<0.001	<0.001	<0.002	<0.005
C71.34	1.55	8.20	2.47	<0.01	0.29	rem	0.025	0.007	0.18	0.029	last	0.03	0.05	0.020	0.16	0.071	0.04
CURM 71.34	1.54	8.19	2.48	<0.005	0.29	86.74	0.023	0.008	0.18	0.031	.	0.04	0.05	0.019	0.18	0.072	0.03
Number	Zn	Sn	Pb	Ni	Fe	Cu	Ag	Al	As	Bi	Co	Cr	Mn	P	S	Sb	Si

**CRM MANGANESE ALLOY SET**

available individually or as a set 40 mm Ø x 13 mm

Number	Ag	As	Fe	Mn	Ni	P	Pb	Sb	Si	Sn	Zn
IMN CK1	0.012	0.013	0.029	1.06	0.44	0.0011	0.0021	0.0049	0.049	0.13	0.24
IMN CK2	0.0094	0.010	0.11	1.51	0.38	0.0022	0.0062	0.0015	0.091	.	0.14
IMN CK3	0.0066	0.0095	0.17	1.78	0.27	0.0043	0.0098	0.0026	0.033	0.075	0.095
IMN CK4	0.0041	0.0055	0.26	1.91	0.13	0.0056	0.017	0.0041	0.0025	0.042	0.065
IMN CK5	.	0.0015	0.29	2.30	0.011	.	.	0.0051	0.011	0.0048	0.033
IMN CK6	0.0012	0.0039	0.40	2.64	0.073	0.013	.	0.0052	0.21	0.025	0.034

**CRM MAGNESIUM ALLOY**

Number Mg Units

IMN CCE1	0.541	40 mm Ø x 25 mm
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## NICKEL ALLOY, chart 1 of 2

#	Number	Ni	Ag	Al	Bi	Co	Cr	Cu	Fe	Mn	Nb	P	Pb	S	Si	Sn	Zn
1	36X 71500A	31.24	.	(0.001)	.	0.0163	.	66.74	0.888	0.850	.	0.0074	0.0114	0.0454	0.0096	0.0112	0.150
1	<b>BS 715B</b>	31.2	.	(0.0060)	.	(0.012)	(0.003)	67.3	0.59	0.745	.	0.0034	(0.003)	0.0034	0.0103	0.0036	0.053
1	<b>BS 715C</b>	31.2	.	(0.004)	.	(0.012)	(0.003)	67.4	0.59	0.706	.	0.0035	(0.003)	0.0036	0.011	0.0040	0.052
1	IARM Cu715-20	31.0	.	(0.004)	.	(0.004)	.	67.4	0.51	0.80	.	(0.009)	(0.001)	(0.002)	(0.09)	(0.004)	(0.007)
1	SRM 1276a	30.8	(0.004)	.	(<0.0001)	0.045	(0.0002)	67.5	0.56	1.01	.	0.006	0.004	(0.008)	(0.001)	0.023	0.038
2	BS 715A	30.22	.	(0.01)	.	.	.	68.0	0.61	0.82	.	0.006	(0.007)	0.001	0.10	0.008	0.10
2	C62.11	29.8	.	.	.	<0.005	.	rem	0.60	0.52	.	.	<0.005	<0.005	0.36	0.04	0.097
2	CTIF CN33	29.75	.	(0.0105)	0.0212	.	.	66.95	1.66	0.490	0.062	0.021	0.053	0.013	0.500	(0.003)	0.385
2	C62.15	25.9	.	.	.	0.042	.	rem	2.36	0.23	.	.	0.016	0.023	0.014	0.03	0.04
1	BAM 389	24.7	.	.	0.0044	0.0770	0.0153	74.3	0.107	0.415	.	0.0093	0.0098	.	.	0.0262	0.1125
2	C62.14	20.2	.	.	.	0.03	.	rem	1.49	0.24	.	.	0.01	0.083	0.022	0.12	0.12
1	IARM 298A	19.6	(0.009)	(0.003)	0.014	(0.016)	(0.005)	65.3	0.73	0.34	<0.01	(0.004)	4.0	(0.011)	0.019	4.0	5.8
1	36X CN24A	15.41	0.0466	(0.0010)	.	0.0096	0.0065	52.56	0.127	23.60	.	0.0037	0.0056	.	.	(0.0023)	8.00
2	C65.28	15.3	.	.	.	.	.	rem	0.13	0.57	.	0.07	0.06	0.03	0.01	0.15	26.7
1	IARM CuH130-18	14.6	(0.0010)	2.76	(0.0020)	0.0037	(0.002)	80.9	0.84	0.449	.	(0.004)	(0.0020)	(0.0010)	0.024	(0.0010)	0.0015
1	36X CN13A	14.52	.	2.65	.	(0.001)	.	81.46	0.870	0.442	.	0.0011	(0.001)	(0.002)	0.012	(0.001)	0.0017
1	IARM CuH191-18	14.5	(0.0020)	1.60	(0.0020)	(0.002)	(0.0013)	(79.6)	0.96	3.79	.	(0.003)	(0.0030)	(0.002)	(0.017)	(0.0020)	0.0010
1	36X CN23A	14.38	0.042	0.007	.	0.0509	0.0029	70.22	0.140	0.0095	.	0.0299	0.115	.	.	0.102	14.88
2	C65.27	13.9	.	.	.	.	.	57.0	0.26	0.13	.	0.02	0.04	0.03	<0.002	0.01	28.7
1	36X CN12A	13.05	.	2.41	.	0.0056	.	83.79	0.105	0.402	0.0010	0.0011	0.0037	.	0.040	(0.0011)	0.157
1	CTIF CN1	12.3	.	(0.003)	.	.	.	85.0	1.1	0.8	(0.1)	.	0.085	0.046	(0.05)	(0.005)	0.2
1	36X CN2K	11.45	0.0274	0.0009	.	0.197	0.0043	86.25	0.0404	(0.69)	0.0176	0.0408	0.0449	0.0100	0.049	0.0258	1.03
2	CTIF CN4	11.2	.	(0.02)	.	.	.	84.0	1.8	1.5	0.7	.	0.006	(0.001)	(0.01)	0.058	0.07
2	BS 706B	10.9	.	<0.003	.	0.005	.	87.00	1.56	0.61	.	0.009	0.006	0.009	<0.002	0.006	0.054
1	36X 70600A	10.65	0.0055	(0.0008)	.	0.0087	.	86.70	1.619	0.759	.	0.0062	0.0086	0.0136	.	0.0090	0.115
2	HRT CU2014	10.49	.	.	.	.	.	86.96	1.60	0.82	.	.	(0.005)	.	.	(0.005)	(0.01)
2	BS 706A	10.18	.	(0.002)	.	0.007	.	87.80	1.30	0.66	.	0.006	0.008	0.012	<0.005	0.011	0.13
2	CTIF CuNi 10	10.08	.	.	.	.	.	87.4	1.69	0.70	.	.	0.0027	(0.002)	.	(<0.01)	0.033

#	Number	Ni	Ag	Al	Bi	Co	Cr	Cu	Fe	Mn	Nb	P	Pb	S	Si	Sn	Zn	
	Number	As	B	Be	C	Cd	Mg	Sb	Te	Ti	Zr	Units						
	36X 71500A	.	0.0049	.	0.0240	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm					
	<b>BS 715B</b>	(0.001)	.	(0.0002)	0.0089	.	.	(0.001)	0:0.0020	.	(0.0002)	38 mm Ø x ~7 or 19+ mm <b>17025, 17034</b>						
	<b>BS 715C</b>	(0.001)	.	(0.0002)	0.0081	.	(0.005)	(0.0014)	0:0.0020	.	(0.001)	38 mm Ø x ~7 or 19+ mm <b>17025, 17034</b>						
	IARM Cu715-20	.	.	.	(0.005)	.	(0.005)	.	.	0.073	.	31 mm Ø x 2 or 18 mm						
	SRM 1276a	(<0.001)	(0.0001)	.	.	0.0002	0.12	0.0004	0.005	(0.0002)	.	32 mm Ø x 19 mm Se: 0.0005						
	BS 715A	(0.0014)	.	.	0.03	.	.	(0.003)	.	.	.	38 mm Ø x ~7 or 19+ mm						
	C62.11	.	.	.	.	0.03	.	.	.	.	.	50 mm Ø x 10 - 12 mm						
	CTIF CN33	.	.	.	0.025	0.0060	0.043	.	0.0224	.	.	60 mm Ø x 5 mm						
	C62.15	.	.	.	.	0.004	.	.	.	.	.	50 mm Ø x 10 - 12 mm						
	BAM 389	.	.	.	.	0.0016	0.067	0.0046	.	0.0660	0.098	40 mm Ø x 30 mm						
	C62.14	.	.	.	.	0.002	.	.	.	.	.	50 mm Ø x 10 - 12 mm						
	IARM 298A	(0.004)	<0.005	<0.001	(0.013)	<0.001	0.0004	(0.04)	<0.005	.	<0.01	31 mm Ø x 2 or 18 mm						
	36X CN24A	(0.0011)	.	.	0.0436	.	.	.	.	.	.	~17 mm Ø x ~17 mm						
	C65.28	.	.	.	.	0.01	.	.	.	.	.	50 mm Ø x 10 - 12 mm						
	IARM CuH130-18	(0.0060)	(0.0009)	.	(0.006)	(0.0030)	0.0013	(0.0030)	.	(0.0010)	(0.0008)	31 mm Ø x 2 or 18 mm CRM						
	36X CN13A	.	(0.002)	.	(0.003)	.	0.0039	.	.	.	.	~38 mm Ø x ~15 mm						
	IARM CuH191-18	.	(0.0030)	.	(0.004)	(0.0010)	0.0059	.	.	.	.	31 mm Ø x 2 or 18 mm CRM						
	36X CN23A	0.047	.	.	.	0.0021	.	.	.	.	.	40 mm Ø x ~17 mm						
	C65.27	.	.	.	.	<0.01	.	.	.	.	.	50 mm Ø x 10 - 12 mm						
	36X CN12A	.	0.0055	.	0.0101	.	0.072	.	.	.	.	~40 mm Ø x ~15 mm						
	CTIF CN1N	.	.	.	(0.002)	.	.	.	.	.	.	60 mm Ø x 5 mm						
	36X CN2K	.	.	.	0.0013	0.0054	0.030	.	.	0.0350	.	~40 mm Ø x ~15 mm						
	CTIF CN4	.	.	.	(0.001)	.	.	.	.	.	.	60 mm Ø x 5 mm						
	BS 706B	<0.0005	.	.	(0.004)	.	.	<0.002	.	.	.	38 mm Ø x ~7 or 19+ mm						
	36X 70600A	.	0.0011	.	(0.0017)	.	.	.	.	.	.	~40 mm Ø x ~15 mm						
	HRT CU2014	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 15 mm						
	BS 706A	<0.0005	.	.	0.004	.	.	0.0006	.	.	.	38 mm Ø x 12 mm last of stock						
	CTIF CuNi 10	.	.	.	(0.009)	.	.	.	.	.	.	40 mm Ø x 18 mm						
	Number	As	B	Be	C	Cd	Mg	Sb	Te	Ti	Zr	Units						

NICKEL ALLOY, chart 2 of 2

#	Number	Ni	Ag	Al	Bi	Co	Cr	Cu	Fe	Mn	Nb	P	Pb	S	Si	Sn	Zn
1	IARM 84C	9.8	(0.002)	.	.	(0.006)	.	89.4	0.28	(0.04)	.	(0.06)	0.047	(0.006)	(0.004)	0.13	0.13
1	34X 79830A	9.76	0.0028	0.0012	.	(0.0012)	.	45.88	0.079	0.311	.	0.0047	2.033	(0.0005)	.	0.1158	41.80
1	<b>BS 706C</b>	9.7	.	(0.001)	.	(0.003)	(0.0006)	87.9	1.68	0.60	.	(0.007)	0.0033	0.0014	0.0018	(0.0070)	0.084
2	CURM 62.12	7.94	.	.	.	0.081	.	89.42	0.45	1.59	.	.	0.053	0.034	0.109	0.111	0.180
2	CTIF CN2	7.80	.	(0.012)	.	.	.	88.40	1.68	1.19	(0.007)	.	0.055	0.028	0.26	(0.0065)	0.515
1	IMN MN5-4	5.90	.	.	0.0018	.	.	Rem	0.083	.	.	0.026	0.024	.	.	.	.
1	IMN MN5-3	5.29	.	.	0.0012	.	.	Rem	0.062	.	.	0.016	0.016	.	.	.	.
1	36X CN21A	5.50	0.0064	1.95	.	0.0079	0.0050	92.17	0.0316	0.0391	.	0.053	0.051	.	.	0.038	0.0203
1	IMN MN5-2	4.50	.	.	0.00071	.	.	Rem	0.033	.	.	0.010	0.012	.	.	.	.
1	IMN MN5-1	3.21	.	.	0.00011	.	.	Rem	0.0041	.	.	(0.00027)	0.0062	.	.	.	.
2	HRT CU2012	2.30	.	.	.	.	.	97.0	0.013	0.002	.	.	.	.	0.63	0.035	.
1	37X 218B	1.892	.	0.0018	.	.	0.176	97.29	0.0209	0.0022	.	.	0.0014	.	0.564	0.0032	0.0054

Number	As	B	Be	C	Cd	Mg	Sb	Ti	Zr	Units
IARM 84C	.	.	.	(0.003)	.	.	(0.0012)	.	.	31 mm Ø x 2 or 18 mm
34X 79830A	0.0070	.	.	(0.0052)	.	.	0.0041	.	.	~38 mm Ø x ~15 mm
<b>BS 706C</b>	(0.001)	0:0.0016 N:(0.005)	.	(0.004)	.	(0.000003)	(0.0006)	.	(0.0000002)	38 mm Ø x ~7 or 19+ mm <b>17025, 17034</b>
CURM 62.12	.	.	.	.	.	0.002	.	.	.	60 mm Ø x 10 mm
CTIF CN2	.	.	.	(0.008)	.	.	.	.	.	60 mm Ø x 5 mm
IMN MN5-4	0.0038	.	.	.	.	.	0.0019	.	.	35 mm Ø x 30 mm
IMN MN5-3	0.0017	.	.	.	.	.	0.0013	.	.	35 mm Ø x 30 mm
36X CN21A	0.0067	.	.	.	0.0021	.	.	.	.	40 mm Ø x ~17 mm
IMN MN5-2	0.0011	.	.	.	.	.	0.00078	.	.	35 mm Ø x 30 mm
IMN MN5-1	0.0007	.	.	.	.	.	0.00019	.	.	35 mm Ø x 30 mm
HRT CU2012	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm
37X 218B	.	.	.	.	.	.	.	.	.	~38 mm Ø x ~15 mm

CRM NICKEL ALLOY SETS

analysis listed in mass % **17034** N: 35 mm Ø x 30 mm NA: 28 mm Ø x 25 mm NC: 40 mm Ø x 12 mm

Number	Ni	Al	As	Bi	C	Cd	Co	Fe	Mg	Mn	P	Pb	S	Sb	Si	Sn	Zn	singles?
<b>IMN NC1</b>	23.17	.	0.00561	0.001106	0.0315	0.0142	0.00615	0.0501	0.00156	0.552	0.0147	0.00252	0.0709	0.00236	0.0854	0.0374	0.775	no
<b>IMN NC2</b>	24.21	0.0218	0.01043	0.00456	(0.0026)	0.0189	0.0115	0.2903	0.00237	0.413	.	0.00204	0.0838	0.00488	0.1961	0.0453	0.508	yes
<b>IMN NC3</b>	24.68	0.230	0.01665	0.00768	(0.0036)	0.0115	0.0282	0.1057	0.0561	0.1484	0.0312	0.00271	(0.0202)	0.00837	0.0609	0.0171	0.2439	yes
<b>IMN NC4</b>	25.40	0.332	0.0251	0.0117	0.0498	0.00492	0.1009	0.426	0.0170	0.0172	0.01128	0.0120	0.00219	0.01128	0.0197	0.00863	0.0985	yes
<b>IMN NC5</b>	25.82	0.0749	0.0426	0.0213	0.00498	0.00183	0.1513	0.370	0.0861	0.0623	0.0222	0.0409	.	0.0161	0.0198	0.00441	0.0156	yes
IMN N1	25.38	.	.	.	.	.	0.0050	0.0056	.	0.0018	.	0.0019	.	.	0.0070	0.0089	0.019	yes
IMN N2	24.28	.	.	.	.	.	0.023	0.35	.	0.21	.	0.011	.	.	0.025	0.012	0.16	yes
IMN N3	22.57	.	.	.	.	.	0.055	1.77	.	0.50	.	0.020	.	.	0.062	0.023	0.33	yes
IMN N4	21.39	.	.	.	.	.	0.080	1.07	.	0.71	.	0.039	.	.	0.13	0.038	0.47	yes
IMN NA1	7.19	.	.	.	(0.020)	.	.	2.52	.	1.51	.	0.081	(0.081)	.	.	.	0.80	yes
IMN NA2	9.05	.	.	.	(0.023)	.	.	2.03	.	1.03	.	0.056	(0.065)	.	.	.	0.55	yes
IMN NA3	10.35	.	.	.	(0.019)	.	.	1.15	.	0.60	.	0.035	(0.036)	.	.	.	0.30	yes
IMN NA4	12.15	.	.	.	(0.012)	.	.	0.50	.	0.21	.	0.0066	(0.0069)	.	.	.	0.019	yes

CRM SEBILOY / ENVIROBRASS / FEDERALLOY

Number	Sn	Zn	Bi	Se	As	Co	Fe	Ni	P	Pb	Sb	Cu
IARM 266A	6.9	3.48	2.37	0.001	0.004	(0.001)	0.035	0.46	0.032	0.010	0.010	(87)
32X SEB5C	5.18	5.30	1.056	0.471	.	0.0156	0.0430	0.317	0.072	0.268	0.0334	87.21
IARM 226A	5.1	4.8	1.7	0.93	0.003	0.001	0.054	0.54	0.005	0.040	0.004	86.7
IARM 227A	5.1	4.70	2.3	1.21	0.003	0.001	0.060	0.53	0.003	0.042	<0.01	85.9
IARM 265A	4.4	2.45	2.4	(0.002)	(0.005)	(0.001)	0.013	0.69	0.024	0.011	0.015	(90)
IARM 228A	4.1	4.1	1.53	0.67	0.003	0.001	0.052	0.45	0.032	0.026	0.010	89.0
IARM 263A	3.5	15.8	2.55	(0.002)	0.003	0.001	0.047	0.66	0.040	0.022	0.06	(78)
IARM 264A	3.03	5.33	3.6	(0.001)	(0.004)	(0.001)	0.048	0.54	0.027	0.057	0.074	(87.3)

  

Number	Ag	Al	B	C	Cd	Cr	Mn	N	O	S	Si	Units
IARM 266A	(0.001)	0.002	.	(0.002)	.	(0.002)	(0.002)	.	.	(0.002)	0.002	31 mm Ø x 2 mm
32X SEB5C	.	(0.001)	.	.	0.0051	.	.	.	.	0.050	.	~40 mm Ø x ~15 mm
IARM 226A	0.004	0.002	.	0.003	.	(0.001)	0.002	<0.0005	(0.001)	0.005	0.002	31 mm Ø x 2 mm
IARM 227A	0.004	0.002	.	0.003	.	(0.001)	0.001	(0.0002)	0.0013	0.005	0.002	31 mm Ø x 2 mm
IARM 265A	(0.002)	0.003	.	.	.	(0.001)	(0.002)	.	.	(0.002)	0.003	31 mm Ø x 2 mm
IARM 228A	0.003	0.002	.	0.003	.	0.001	0.001	<0.0005	(0.002)	0.004	0.002	31 mm Ø x 2 or 18 mm
IARM 263A	(0.006)	(0.002)	.	<0.005	.	(0.002)	(0.002)	.	.	(0.002)	0.003	31 mm Ø x 2 or 18 mm
IARM 264A	(0.005)	0.003	.	(0.004)	.	(0.002)	(0.002)	.	.	0.0013	0.003	31 mm Ø x 2 or 18 mm

**CRM PHOSPHORUS ALLOY**

40 mm Ø x 25 mm

Number	P	As	Bi	Cu	Fe	Ni	Pb	Sb	Se	Sn	Te	Zn
IMN CO2	11.60	0.0050	0.0049	Rem	0.096	0.013	0.070	0.065	(0.0045)	0.35	(0.0055)	0.15
IMN CO5	9.45	0.0023	0.00095	Rem	0.11	0.0082	0.0044	0.034	(0.0015)	0.55	(0.0023)	0.061
IMN CO3	9.26	0.011	0.015	Rem	0.11	0.10	0.10	0.14	(0.0073)	0.037	(0.0080)	0.24
IMN CO4	5.54	0.016	0.0086	Rem	0.29	0.25	0.29	0.092	(0.010)	0.13	(0.012)	0.029

**RM SILVER ALLOY**

31 mm Ø x 2 or 18 mm

Number	Ag	C	P	S	Zr
IARM 159A	3.48	(0.002)	(<0.01)	(<0.01)	.
IARM 160A	3.03	0.003	(0.004)	(<0.003)	0.40

Al, Co, Cr, Fe, Mn, Ni, Pb, Si, Sn, and Zn: (<0.01)

**CRM SILVER ALLOY SET**

available in set only 40 mm Ø x 25 mm

Number	Ag
IMN CCA-1	0.00720
IMN CCA-2	0.0539
IMN CCA-3	0.757
IMN CCA-4	1.524
IMN CCA-5	1.964

**RM TIN COPPER**

cast typical analysis

32X: 40 mm Ø x 15 mm

C: 50 mm Ø x 10-12 mm

Number	Sn	Al	As	Bi	Cu	Fe	Mg	Mn	Ni	P	Pb	S	Sb	Si	Zn
C11.04	9.6	<0.005	<0.005	<0.0005	rem	<0.005	<0.001	<0.005	<0.005	0.05	0.01	<0.001	<0.005	<0.005	<0.005
C11.03	7.4	<0.005	<0.005	<0.0005	rem	<0.005	<0.001	<0.005	<0.005	0.04	0.01	<0.001	<0.005	<0.005	<0.005
C11.02	5.5	<0.005	<0.005	<0.0005	rem	<0.005	<0.001	<0.005	0.006	0.02	0.02	<0.001	<0.005	<0.005	<0.005
C11.01	3.4	<0.005	<0.005	<0.0005	rem	<0.005	<0.001	<0.005	0.006	0.009	0.01	<0.001	<0.005	<0.005	<0.005

**CRM TIN COPPER SET**

available in SET/5 or individually

40 mm Ø x 30 mm

Number	Ag	As	Bi	Cu	Fe	Ni	P	Pb	Sb	Sn	Zn
IMN CM1	0.010	0.0098	0.010	Rem	0.019	0.0086	0.0088	0.012	0.012	0.61	0.021
IMN CM2	0.0061	0.0068	0.0072	Rem	0.0064	0.0055	0.0058	0.0067	0.0068	0.84	0.0061
IMN CM3	0.0029	0.0036	0.0033	Rem	0.012	0.0031	0.0041	0.0038	0.0040	1.06	0.0060
IMN CM4	0.0011	0.0011	0.00093	Rem	0.0042	0.0011	0.0009	0.0023	0.0019	1.30	0.0020
IMN CM5	.	(0.015)	0.014	Rem	0.0094	0.014	0.015	0.019	0.018	1.14	0.013

**CRM BRASS SETS**

wrought IMN MG2 in SET only, all others OK individually MB: 40 mm Ø x 18 mm ME, MG, WR: 35-40 mm Ø x 25-30 mm WC: 40 mm Ø x 12 mm

Number	Cu	Zn	Al	As	Bi	Cd	Co	Cr	Fe	Mn	Ni	P	Pb	Sb	Si	Sn
IMN MG1	91.14	Rem	0.040	.	0.00058	.	.	.	0.0081	0.0013	0.048	(0.0019)	0.049	0.00077	.	0.0062
IMN MG2	90.08	Rem	(0.0026)	.	0.00039	.	.	.	0.0067	0.0007	0.0022	0.0012	0.0048	(0.00084)	.	0.018
IMN MG3	93.19	Rem	0.020	.	0.0014	.	.	.	0.062	0.0096	0.013	0.018	0.015	0.0026	.	0.033
IMN MG4	94.00	Rem	.	.	0.0017	.	.	.	0.091	0.024	0.0042	0.012	0.008	0.0045	.	0.023
IMN MG5	95.09	Rem	0.0011	.	0.0026	.	.	.	0.149	0.0036	0.0021	0.0069	0.0054	0.0061	.	0.013
IMN MG6	92.27	Rem	0.0067	.	0.00088	.	.	.	0.028	0.045	0.030	0.0026	0.0031	0.0015	.	0.053
IMN WC1	75.10	Rem	0.0034	0.0043	0.0028	.	.	.	0.031	.	.	0.015	0.046	0.0034	0.26	0.0032
IMN WC2	75.05	Rem	0.0016	0.0024	0.0020	.	.	.	0.015	.	.	0.011	0.031	0.0023	0.41	0.0025
IMN WC3	75.28	Rem	0.0018	0.0011	0.00093	.	.	.	0.021	.	.	0.0058	0.0085	0.0010	0.89	0.0011
IMN WC4	75.32	Rem	0.00096	.	0.00047	.	.	.	0.0067	.	.	0.0048	0.0051	0.00080	0.76	0.0010
IMN WC5	75.03	Rem	0.00084	0.0022	0.0019	.	.	.	0.18	.	.	.	0.0055	0.0011	0.48	0.0044
IMN WC6	75.32	Rem	0.0019	0.00097	0.0012	.	.	.	0.051	.	.	0.0037	0.0036	0.00057	0.58	0.0028
IMN ME2	71.29	Rem	.	.	.	.	.	.	.	.	.	.	.	.	.	0.87
IMN ME3	70.70	Rem	.	.	.	.	.	.	.	.	.	.	.	.	.	1.11
IMN ME4	69.40	Rem	.	.	.	.	.	.	.	.	.	.	.	.	.	1.21
IMN ME5	68.53	Rem	.	.	.	.	.	.	.	.	.	.	.	.	.	1.42
IMN MB2	67.17	32.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.
IMN MB3	73.26	26.67	.	.	.	.	.	.	.	.	.	.	.	.	.	.
IMN MB7	95.00	4.99	.	.	.	.	.	.	.	.	.	.	.	.	.	.
IMN WR1	55.72	Rem	0.496	0.203	0.00109	0.00045	0.00196	0.00049	0.0577	1.051	3.534	0.00122	0.0496	0.00046	1.097	0.605
IMN WR2	56.99	Rem	1.092	0.0129	0.00642	0.00548	0.00210	0.00705	0.802	1.631	2.683	0.0311	0.291	0.00566	0.817	0.453
IMN WR3	58.95	Rem	1.683	0.0492	0.0118	0.00807	0.0106	0.0149	0.184	1.674	1.799	0.0126	0.514	0.0150	0.566	0.254
IMN WR4	60.07	Rem	2.297	0.00528	0.0211	0.0154	0.0154	0.0190	0.600	2.254	0.989	0.0213	0.683	0.0247	0.279	0.100
IMN WR5	61.20	Rem	3.024	0.00129	0.0278	0.0200	0.0196	0.0253	0.141	3.070	0.251	0.0282	0.885	0.0334	0.0485	0.0116

Number	Cu	Zn	Al	As	Bi	Cd	Co	Cr	Fe	Mn	Ni	P	Pb	Sb	Si	Sn
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**RM TRACE ELEMENTS IN BRASS**

cast 50 mm Ø x 10 - 12 mm

Number	Cu	Zn	Al	As	Bi	Fe	Mn	Ni	Pb	Sb	Si	Sn
C30.10	93.8	6.1	<0.002	<0.005	<0.002	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
C30.07	82.0	rem	<0.002	<0.005	<0.002	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
C30.06	74.8	rem	<0.005	<0.005	<0.002	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
CURM 30.05	69.48	30.53	<0.001	<0.001	<0.003	<0.003	<0.0005	<0.0005	<0.002	<0.005	<0.001	<0.001
C38.06	(62)	rem	<0.001	<0.005	<0.001	<0.002	<0.002	<0.005	<0.005	<0.002	<0.002	<0.002
C38.06-1	(62)	rem	<0.001	<0.001	<0.0005	<0.005	<0.001	<0.005	0.002	<0.002	<0.002	<0.002
C30.17	61.6	rem	<0.005	<0.005	<0.005	1.4	<0.005	0.01	0.01	<0.005	<0.005	<0.01
C30.16	61.2	rem	<0.002	<0.005	<0.002	0.90	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
C38.01	(61)	rem	0.003	0.03	<0.0005	0.01	0.009	0.01	0.20	0.02	<0.0005	0.20
C38.02	(61)	rem	0.004	0.06	0.005	0.09	0.14	0.03	0.10	0.06	0.01	0.09
C38.03	(61)	rem	0.06	0.08	0.008	0.05	0.07	0.13	0.06	0.08	0.07	0.05
C38.04	(61)	rem	0.02	0.04	0.008	0.04	0.22	0.06	0.03	0.12	0.12	0.02
C38.05	(61)	rem	0.12	0.01	0.01	0.008	0.02	0.19	0.02	0.01	0.14	0.01
C30.12	60.85	rem	<0.005	<0.005	<0.002	<0.005	0.90	0.52	<0.01	<0.005	<0.005	<0.01
C30.03	60.6	39.3	<0.002	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
C30.13	60.6	rem	<0.002	<0.005	<0.002	<0.005	1.9	<0.01	<0.01	<0.005	<0.005	<0.01
C30.15	60.6	rem	<0.002	<0.005	<0.002	0.55	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
C30.14	60.5	rem	<0.005	<0.005	<0.005	<0.01	2.4	1.0	<0.01	<0.005	<0.005	<0.005
C30.22	58.28	rem	<0.003	0.011	<0.005	0.006	<0.005	<0.01	1.05	<0.012	<0.005	0.009
C30.02	55.6	rem	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01
C30.01	51.48	rem	<0.002	<0.005	0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01

last of stock

current batch

**RM BRASS MUSHROOMS**

chill cast typical analysis 60 mm Ø x 5 mm

Number	Zn	Cu	Al	As	Be	Fe	Ni	Mg	Mn	P	Pb	Sb	Si	Sn
CTIF L 7	42.45	55.6	0.308	.	.	0.031	0.020	.	0.62	.	0.71	.	0.13	0.038
CTIF L 1-1	39.7	59.60	0.015	.	.	0.017	0.106	.	.	0.080	0.062	.	0.36	0.046
CTIF L 2	35.55	61.55	0.485	.	.	0.216	0.71	.	0.350	.	0.408	.	0.202	0.48
CTIF L 3-1	35.50	(58.60)	1.22	0.073	.	0.357	0.993	.	0.214	0.030	1.32	(0.032)	0.025	1.62
CTIF L 4-1	34.55	61.75	0.100	.	.	0.466	0.227	.	0.109	.	2.017	.	0.12	0.693
CTIF L4-2	32.6	63.2	0.059	0.039	.	0.423	0.298	.	0.121	0.048	2.22	0.052	0.11	0.715
CTIF L 6	30.26	66.55	0.139	.	.	0.085	1.21	.	0.055	.	0.205	.	1.25	0.250
CTIF L 23	17.90	81.20	.	0.051	.	0.246	0.033	.	.	0.05	0.058	.	0.280	0.20
CTIF UZ 52	16.90	81.18	.	.	0.014	0.32	0.084	0.04	0.002	0.068	0.11	0.08	0.12	1.06
CTIF UZ 53	16.67	82.60	.	0.01	.	0.255	0.025	.	<0.001	0.055	0.025	.	0.145	0.205
CTIF L 21	15.40	82.50	.	0.103	.	0.086	0.156	.	0.004	0.05	0.209	0.10	0.036	1.5
CTIF L 22	15.0	84.3	<0.02	<0.006	.	0.20	0.10	.	<0.01	.	0.10	.	<0.05	1.0
CTIF L 20	13.10	85.55	0.008	0.122	.	0.115	0.205	.	0.043	.	0.27	.	0.035	0.56

last

## BRASS

# = class, where 1 = CRM and 2 = RM

CURM: cast 50 mm Ø x 10-12 mm  
SRM: wrought 31 mm Ø x 19 mmPB: 45 mm Ø x 25 mm  
others: chill cast ~38-43 mm Ø x ~15-18 mm

#	Number	Zn	Cu	Al	As	Bi	Fe	Mn	Ni	Pb	Sb	Si	Sn
1	31X B25C	42.2	55.6	0.48	0.027	0.061	0.014	0.128	0.255	0.272	0.075	0.235	0.62
2	CURM 30.15	38.88	60.66	<0.001	.	.	0.50	<0.001	<0.001	<0.005	.	<0.005	<0.002
2	CURM 30.16	38.33	60.53	<0.001	.	.	1.14	<0.001	<0.001	<0.005	.	<0.005	<0.002
2	CURM 30.11	38.17	59.86	<0.001	.	.	0.002	0.23	1.70	0.005	.	<0.001	<0.002
1	IARM 75C	38.1	60.7	(0.003)	(0.005)	(0.0012)	(0.06)	(0.0024)	(0.013)	0.42	(0.007)	(0.005)	0.69
2	SRM 1107	37.3	61.2	.	.	.	0.037	.	0.098	0.18	.	.	1.04
1	31X TB1L	36.8	61.5	0.174	0.052	0.049	0.072	0.287	0.199	0.325	0.101	0.097	0.214
1	31X B10N	36.6	60.9	0.149	0.0099	0.021	0.135	0.160	1.56	0.022	0.0207	0.012	0.047
1	31X B5L	23.98	75.38	0.0138	0.0357	0.0088	0.038	(0.002)	0.0275	0.084	0.016	(0.005)	0.266
1	31X B22G	17.8	80.5	0.100	0.150	0.148	0.107	0.00076	0.142	0.197	0.147	0.152	0.225
1	31X B9M	4.92	94.81	(0.0006)	0.0103	0.0059	0.0361	0.0006	0.0379	0.090	0.0089	.	0.062
2	PB MS10	.	84.26	.	0.014	0.37	0.28	0.016	0.025	0.020	(0.009)	0.12	0.052
1	BAM M396	.	65.49	0.223	0.0590	0.00032	0.0235	0.00445	0.0143	.	0.00061	.	.

Number	Ag	B	C	Cd	Co	Cr	P	S	Se	Te
31X B25C	0.0025	.	.	0.00019	.	(0.0002)	0.116	.	.	.
CURM 30.15	.	.	.	.	.	.	.	.	.	.
CURM 30.16	.	.	.	.	.	.	.	.	.	.
CURM 30.11	.	.	.	.	.	.	.	.	.	.
IARM 75C	.	<0.1	(0.002)	(0.0015)	(0.0007)	0.0009	(0.004)	(0.0015)	(0.005)	.
SRM 1107	.	.	.	.	.	.	.	.	.	.
31X TB1L	0.061	0.0005	.	0.0122	0.0017	0.0024	0.0080	(0.002)	(0.0008)	(0.004)
31X B10N	0.0030	.	.	0.0005	0.0062	0.0006	0.033	.	(0.0009)	.
31X B5L	.	(0.0009)	.	0.0040	0.0250	.	.	.	.	.
31X B22G	0.0015	0.0029	.	0.0130	0.059	(0.0006)	0.214	.	(0.0007)	.
31X B9M	0.0065	(0.0005)	.	.	.	.	0.0047	.	0.0019	0.0181
PB MS10	.	.	.	.	.	.	.	.	last	.
BAM M396	.	.	.	0.00022	0.00012	0.00079	0.00089	.	<0.001	.

38 mm Ø x 30 mm

Number	Ag	B	C	Cd	Co	Cr	P	S	Se	Te
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**ALUMINUM BRASS**

# = class, where 1 = CRM and 2 = RM

#	Number	Al	Zn	Cu	As	Bi	Fe	Mn	Ni	Pb	Sb	Si	Sn	Other	Units
2	CTIF LH1-1	7.99	16.90	64.90	.	.	4.48	5.18	0.0944	0.022	0.081	0.205	(0.007)	P: 0.079	60 mm Ø x 5 mm
2	CTIF LH 2	6.20	21.95	61.98	.	.	2.98	3.65	3.00	0.080	.	0.086	0.055		60 mm Ø x 5 mm
2	CTIF LH6-2	5.6	19.2	64.1	.	.	(3.7)	4.42	2.35	0.275	.	0.040	0.27		60 mm Ø x 5 mm
1	BAM 388	4.972	4.81	89.27	.	.	0.0303	0.0512	0.00736	0.000969	.	.	0.857		40 mm Ø x 30 mm
2	C30.19	4.65	rem	69.9	<0.005	<0.002	<0.005	<0.005	<0.01	<0.01	<0.01	<0.005	1.07		50 mm Ø x 10-12 mm
1	31X B14G	4.02	36.52	58.85	0.0091	0.0103	0.0183	0.0117	0.0190	0.0104	0.0139	0.051	0.486	Ag:0.0130 Co:0.0109	~40mmØ x ~15mm
2	CTIF LH 5-1	3.65	25.72	66.0	.	.	1.26	1.37	1.57	0.110	.	0.114	0.141		60 mm Ø x 5 mm
2	CURM 30.18	3.28	32.33	63.66	.	.	0.006	<0.001	<0.001	<0.005	.	0.131	0.58		50 mm Ø x 10-12 mm
2	CTIF LH 7	3.16	(26.85)	63.40	.	.	(2.35)	2.96	0.70	0.327	.	0.055	0.227		60 mm Ø x 5 mm
1	31X B15H	2.98	36.80	59.07	0.0048	0.0074	0.0176	0.0122	0.0102	0.0073	0.0111	0.109	0.944	Ag:0.0071 Co:0.0046	~40mmØ x ~15mm
2	C30.18	2.91	rem	64.36	<0.005	<0.003	<0.005	<0.005	<0.005	<0.01	<0.005	0.10	0.65		50 mm Ø x 10-12 mm
2	CURM 43.01	2.75	22.44	74.36	0.118	<0.002	0.008	0.064	0.121	<0.002	<0.001	0.063	0.116		60 mm Ø x 10-12 mm
2	CTIF LH 10	2.66	28.90	59.05	.	.	(1.0)	3.57	1.49	1.76	.	1.30	0.203		60 mm Ø x 5 mm
2	CURM 43.02	2.40	20.82	76.21	0.083	<0.001	0.128	0.035	0.068	0.064	<0.001	0.038	0.060		50 mm Ø x 10-12 mm
2	CURM 30.20	2.32	35.71	61.46	.	.	<0.005	<0.001	<0.001	<0.002	.	0.17	0.40		50 mm Ø x 10-12 mm
2	CTIF LH 13	2.00	31.8	55.75	.	.	(2.00)	3.14	3.22	0.67	.	0.21	1.19		60 mm Ø x 5 mm
1	31X B16H	1.98	37.18	58.37	0.0056	0.0042	0.0162	0.0029	0.0076	0.0295	0.0126	0.197	2.13	Ag:0.0052 Co:0.0023	~40mmØ x ~15mm
2	C43.03	1.6	rem	79.7	<0.005	<0.005	0.07	<0.002	<0.005	0.10	<0.01	<0.005	<0.005		50 mm Ø x 10-12 mm
1	BAM 368 *	1.972	rem	77.049	0.0246	.	0.0193	0.0203	0.0258	0.01313	(0.002)	.	0.0147	P: 0.00899	50 mm Ø x 30 mm
2	C30.21	1.44	rem	56.0	<0.005	.	<0.005	<0.005	<0.005	<0.005	<0.01	0.18	1.96		50 mm Ø x 10-12 mm
2	CURM 30.21	1.44	40.08	56.23	.	.	0.003	<0.001	<0.001	0.004	.	0.213	2.01		50 mm Ø x 10-12 mm
2	CTIF LH 12	1.13	33.15	62.75	.	.	(1.2)	0.125	0.505	0.21	.	(0.06)	0.83		60 mm Ø x 5 mm
2	CTIF LH 11	0.46	26.20	66.80	.	.	0.36	0.71	2.91	1.26	.	0.88	0.44		60 mm Ø x 5 mm

\* BAM 368 also contains 62.1 ppm Mg

**CRM ALUMINUM BRASS SET**

IMN W02 available in SET/4 only, others individually

40 mm Ø x 35 mm

Number	Al	As	Bi	Cd	Cr	Cu	Fe	Mg	Mn	Ni	P	Pb	Sb	Si	Sn	Zn
IMN W01	1.33	0.056	0.0003	0.013	0.013	78.85	0.13	0.00060	0.014	0.0043	0.0023	0.15	0.0083	0.044	0.011	Rem
IMN W02	1.76	0.041	0.0014	0.032	0.0098	77.80	0.050	0.0066	0.16	0.031	0.0090	0.098	0.00098	0.013	0.056	Rem
IMN W03	2.15	0.015	0.0047	0.039	0.0027	77.58	0.029	0.0055	0.051	0.11	0.0062	0.054	0.0035	0.007	0.0071	Rem
IMN W04	2.50	0.030	0.0098	0.0063	0.00034	76.20	0.022	0.013	0.074	0.077	0.015	0.020	0.0058	0.001	0.13	Rem

**CRM BISMUTH BRASS**

analysis listed in mass % except \* which is mg/kg

~38-40 mm Ø x ~15 mm

Number	Bi	Zn	Cu	Ag*	Al	As	B*	Cd*	Co	Cr*	Fe	Mn	Ni	P	Pb	S*	Sb	Se*	Si	Sn
31X BIB1E	1.96	34.0	62.7	14	0.213	0.0290	.	91	0.0057	.	0.074	0.0266	0.301	0.062	0.090	(30)	0.012	(10)	0.065	0.376
31X BIB2-21	1.11	37.1	58.7	.	0.81	0.025	.	62	0.026	.	0.122	0.0258	0.58	0.035	0.131	.	0.083	.	0.18	1.31
31X BIB4D	0.80	34.8	62.9	14	0.435	0.0095	19	22	0.0108	6	0.094	0.00082	0.211	0.039	0.096	(50)	0.022	11	0.060	0.58

**RM CARTRIDGE BRASS**

cast typical analysis listed in mass %

31X: ~40 mm Ø x ~15 mm

others: 50 mm Ø x 10 - 12 mm

Number	Zn	Cu	Al	As	Bi	Cd	Cr	Fe	Mg	Mn	Ni	P	Pb	S	Sb	Si	Sn
CURM 48.01	32.6	66.98	<0.001	0.067	0.038	<0.0003	*	0.049	0.0008	<0.001	0.134	0.016	0.106	<0.001	0.047	0.041	<0.002
CURM 48.02	32.58	67.16	0.013	0.025	0.004	*	0.004	0.053	*	0.067	<0.001	0.012	0.084	0.007	0.037	0.010	0.035
CURM 48.05	31.0	68.69	<0.002	<0.001	*	<0.0003	*	0.066	*	0.016	0.117	0.007	<0.003	0.013	*	0.026	0.083
31X B4N	30.22	69.3	Cr:0.0013	0.059	0.0139	0.032	0.0083	0.043	.	0.032	0.019	0.0083	0.080	(0.002)	0.006	0.030	0.046
C48.03	rem	70.45	0.007	0.079	0.029	0.013	0.0005	<0.001	0.001	0.040	0.030	<0.001	0.054	0.004	0.097	<0.002	0.047
C48.06	rem	71.6	0.002	0.008	0.004	0.008	0.0006	0.02	0.001	0.006	0.11	0.002	0.02	0.006	0.006	0.006	0.03
CURM 48.04	26.99	72.68	<0.001	0.034	0.014	<0.0003	<0.002	0.008	0.0005	0.012	0.096	0.006	0.043	0.011	0.026	0.004	0.018

\* For the above chart, \* indicates a value of <0.0005

**CRM ISO 17034 CARTRIDGE BRASS**

available in SET/5 or individually remainder is Zinc

wrought 40 mm Ø x 25 mm

Number	Ag	Al	As	Be	Bi	Cd	Cu	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Te
IMN MH1	0.00288	0.00108	0.0669	0.00878	0.00374	0.0261	65.95	0.01722	0.0349	0.259	0.0159	0.00649	(0.0034)	0.00039	0.0739	0.1406	0.00044
IMN MH2	0.0106	0.0188	0.0412	0.00152	0.00224	0.0178	68.25	0.0268	0.0107	0.219	0.00554	0.0213	(0.0055)	0.0236	0.0535	0.0974	0.00153
IMN MH3	0.0066	0.0082	0.0162	0.000263	0.00114	0.00890	71.28	0.0810	0.0855	0.096	0.00347	0.0782	(0.0092)	0.0126	0.0307	0.02358	0.0046
IMN MH4	.	0.00276	0.00107	0.00438	0.00059	0.00294	69.92	0.1289	0.00165	0.0521	0.00215	0.326	(0.0043)	0.0169	0.01554	0.01079	0.00352
IMN MH5	0.0254	0.0135	0.00379	0.000041	.	0.00118	72.87	0.1944	0.0721	0.00723	0.00108	0.199	(0.018)	0.00349	(0.0039)	0.00206	0.0048

## CRM CARTRIDGE BRASS SETS

Number	Cd	Cr	Cu	Se	Zn	Zr	Units							
IMN MJ1	0.00355	0.0120	67.77	0.00062	Rem	.	available	individually	40 mm	Ø x	~28 mm			
IMN MJ2	0.00377	0.00440	66.40	0.00037	Rem	.	available	individually	40 mm	Ø x	~28 mm			
IMN MJ3	0.00165	0.00158	67.39	0.00035	Rem	.	available	individually	40 mm	Ø x	~28 mm			
IMN MJ4	0.00130	0.00374	68.06	0.0124	Rem	.	available	individually	40 mm	Ø x	~28 mm			
IMN MJ5	0.000360	0.00065	(67.82)	0.00288	Rem	.	available	individually	40 mm	Ø x	~28 mm			
IMN MJJ1	.	.	67.82	.	Rem	0.0454	available	individually	40 mm	Ø x	~28 mm			
IMN MJJ2	.	.	(68.03)	.	Rem	0.00017	available	individually	40 mm	Ø x	~28 mm			
IMN MJJ3	.	.	67.87	.	Rem	0.00070	available	individually	40 mm	Ø x	~28 mm			
IMN MJJ4	.	.	67.75	.	Rem	0.0074	available	individually	40 mm	Ø x	~28 mm			

## CRM FREE CUTTING BRASS SET

40 mm Ø x 25 mm

Number	Al	As	Bi	Cu	Fe	Mn	Ni	P	Pb	Sb	Si	Sn	Zn		
IMN WN1	0.33	0.035	0.023	58.44	0.23	0.57	0.29	0.031	0.51	0.099	0.16	1.00	Rem	available	individually
IMN WN2	0.24	0.011	0.035	60.38	0.29	0.73	0.19	0.051	1.58	0.10	0.22	0.68	Rem	available	in SET/5 only
IMN WN3	0.14	0.032	0.020	62.32	0.062	0.39	0.098	0.034	2.62	0.020	0.12	0.39	Rem	available	in SET/5 only
IMN WN4	0.047	0.021	0.0094	57.97	0.11	0.13	0.050	0.014	0.86	0.061	0.036	0.13	Rem	available	individually
IMN WN5	(0.0004)	0.030	0.0028	64.36	0.0085	0.0020	0.0049	0.0051	3.78	0.0035	(0.0013)	0.019	Rem	available	individually

## LEADED BRASS

# = class, where 1 = CRM and 2 = RM

#	Number	Pb	Sn	Zn	Cu	Al	As	Bi	Co	Fe	Mn	Ni	P	Sb	Si
1	IARM Cu844-18	6.7	3.08	9.5	80.5	0.0010	0.0041	0.030	0.0015	0.030	.	0.209	0.0018	0.037	(0.001)
1	IMN BR1	5.03	4.9	5.07	Rem	0.0074	0.0102	.	.	0.085	0.080	0.48	0.009	0.090	(0.0077)
1	IARM Cu836-18	4.9	5.02	5.09	84.5	.	0.0098	0.035	0.0026	0.049	.	0.423	0.028	0.103	(0.003)
1	IMN WD-1	3.74	0.026	Rem	58.45	0.0043	0.0033	0.054	.	0.011	0.17	0.120	0.022	0.042	0.0048
1	SRM 1124	3.363	0.3112	35.19	(62.5)	.	.	(0.0202)	(0.0014)	0.2068	(0.0009)	0.0801	(0.0224)	0.02325	.
1	IMN WD-2	3.18	0.077	Rem	58.58	0.0081	0.041	0.036	.	0.047	0.22	0.049	0.0070	0.038	0.011
1	BAM M375a	3.07	0.158	38.3	57.67	0.0107	0.0178	0.00588	0.00713	0.176	0.01395	0.1178	0.0083	0.0119	(0.0103)
2	CURM H30.24	3.62	<0.001	37.92	58.87	<0.001	<0.001	<0.001	.	0.005	<0.001	<0.001	.	<0.001	<0.001
1	33X RB2B	2.99	4.65	9.01	82.02	0.0078	0.0395	0.091	0.0326	0.503	0.0076	0.330	0.0435	0.0494	(0.0017)
1	BS 360C	2.86	0.104	35.3	61.5	(0.026)	(0.016)	.	(0.0003)	0.096	0.0025	0.020	(0.007)	0.0043	0.0026
1	BS 360B	2.77	0.15	35.7	(61.2)	(0.001)	0.002	.	(0.002)	0.117	0.0094	0.040	(0.002)	0.017	0.002
1	IARM Cu360-18	2.73	0.29	35.1	61.6	(0.010)	0.026	(0.0023)	0.0010	0.27	0.0131	0.0120	(0.003)	0.012	(0.010)
1	IMN WD-3	2.69	0.29	Rem	60.16	0.048	0.022	0.020	.	0.12	0.18	0.10	0.012	0.023	0.033
1	BS 360D	2.68	0.153	35.0	61.8	(0.0003)	(0.040)	.	(0.0004)	0.155	0.0011	0.029	(0.002)	(0.007)	(0.001)
1	31X B19S	2.36	0.0556	37.3	59.7	0.015	0.0214	0.019	0.0007	0.357	0.0194	0.0249	0.016	0.036	0.015
1	31X 7835-2L	2.07	0.206	33.4	63.7	0.136	0.069	0.013	0.0036	0.25	.	0.051	(0.08)	0.073	0.023
1	31X CZ132A	2.05	0.160	39.90	57.63	0.0007	0.0119	.	0.0009	0.165	.	0.0510	.	0.0054	(0.004)
1	IMN WD-7	2.03	0.31	Rem	60.53	0.16	0.019	0.014	.	0.10	0.30	0.17	0.019	0.020	0.17
2	HRT CU2015	2.00	0.19	.	57.57	.	.	.	.	0.14	.	0.04	0.004	.	.
1	31X CZ122A	1.97	0.0866	36.21	61.51	.	0.150	.	.	0.066	0.00097	0.0261	.	0.0088	(0.001)
1	BAM M394	1.93	0.232	.	57.70	(0.00010)	0.01001	0.00081	.	0.1191	0.00141	0.0399	0.00157	0.00238	(0.00053)
1	BAM M394a	1.92	0.174	.	57.64	(0.00079)	0.00959	0.00083	.	0.1323	0.00125	0.0386	0.00172	0.00241	(0.00058)
1	IMN WD-4	1.88	0.53	Rem	60.62	0.10	0.011	0.013	.	0.22	0.027	0.21	0.025	0.012	0.022
1	31X 7835-3K	1.70	0.355	36.64	59.9	0.488	0.059	0.0298	0.0069	0.484	0.048	0.146	0.033	0.060	(0.077)
1	IMN WD-5	1.31	0.77	Rem	61.84	0.18	0.0066	0.0085	.	0.34	0.0054	0.31	0.039	0.0071	0.099
1	31X 7835-6D	1.31	0.70	37.2	59.9	0.527	0.0069	0.0047	0.0059	0.118	.	0.061	0.038	.	0.004
2	BS 857B-1	1.22	1.14	34.91	61.3	0.35	(0.001)	.	.	0.30	0.003	0.61	0.004	(0.002)	0.004
2	BS 857B-2	1.21	1.13	34.91	[62.4]	0.364	0.0004	.	.	0.30	0.003	0.61	0.003	.	0.003
2	BS 857B-3	1.21	1.13	34.91	[62.4]	0.351	0.0003	.	.	0.30	0.003	0.61	0.003	.	0.004
2	BS 857B-4	1.20	1.13	34.91	[62.4]	0.339	0.0004	.	.	0.30	0.003	0.61	0.003	.	0.005
1	31X CZ115A	1.169	0.729	39.20	57.19	0.0007	0.0008	.	.	0.601	1.095	0.0143	0.0091	0.0020	(0.005)
1	31X 7835-4K	0.98	0.200	38.0	59.9	0.153	0.058	0.018	0.0058	0.239	0.0262	0.099	0.156	0.0284	.
1	IMN WD-6	0.82	1.00	Rem	62.42	0.30	0.056	0.0019	.	0.58	0.47	0.0087	0.052	0.050	0.060
1	31X CZ112A	0.458	1.130	37.07	61.24	(0.0006)	0.0052	.	.	0.0488	0.0010	0.0150	0.0136	0.0043	(0.0033)
#	Number	Pb	Sn	Zn	Cu	Al	As	Bi	Co	Fe	Mn	Ni	P	Sb	Si
Number		Ag	B	Be	C	Cd	Cr	Mg	O	S	Se	Te	Units		
IARM	Cu844-18	0.0133	.	.	.	(0.0008)	.	.	.	0.023	0.0040	.	~38 mm Ø x ~3 or ~19 mm		
IMN	BR1	.	.	.	.	.	.	.	.	0.014	.	.	40 mm Ø x ~25 mm		
IARM	Cu836-18	0.0292	.	.	.	0.0014	.	.	.	0.041	0.0016	.	~38 mm Ø x ~3 or ~19 mm		
IMN	WD-1	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm		
SRM	1124	0.0131	.	.	.	0.00651	0.0155	.	.	(0.0031)	.	.	cont. cast 39 mm Ø x 19 mm		
IMN	WD-2	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm		
BAM	M375a	0.00507	.	.	.	0.00623	<0.0001	Ge: (0.0015)	In: 0.01090	.	.	0.00429	38 mm Ø x 30 mm		
CURM	H30.24	.	.	.	.	.	.	(0.2)	.	.	.	.	56 mm Ø x 10 - 12 mm		
33X	RB2B	0.105	.	.	.	.	(0.0013)	.	.	0.069	.	0.0078	chill cast ~42 mm Ø x ~17 mm		
BS	360C	0.0040	.	(0.0002)	0.0014	.	(0.0008)	.	(0.0007)	(0.0008)	.	N: (0.0002)	38 mm Ø x ~7 or 19+ mm 17025, 17034		
BS	360B	0.006	.	(0.001)	(0.002)	.	(0.0001)	.	0.0007	(0.0005)	.	(0.002)	38 mm Ø x 19 mm 17025		
IARM	Cu360-18	0.011	.	.	(0.003)	0.0034	(0.003)	.	.	.	.	.	31 mm Ø x 2 or 18 mm		
IMN	WD-3	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm		
BS	360D	0.0059	.	(0.0003)	0.0013	.	(0.0005)	.	(0.0009)	(0.0008)	.	.	38 mm Ø x ~7 or 19+ mm 17025, 17034		
31X	B19S	0.0041	.	.	.	0.0110	0.0012	.	.	(0.003)	0.0010	0.0012	~38 mm Ø x ~15 mm		
31X	7835-2L	0.015	0.0012	.	.	0.0040	.	.	.	.	.	.	chill cast ~40 mm Ø x ~15 mm		
31X	CZ132A	0.0050	.	.	.	0.0012	.	.	.	0.0008	.	.	wrought ~40 mm Ø x ~15 mm		
IMN	WD-7	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm		
HRT	CU2015	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm		
31X	CZ122A	0.0030	(0.0004)	.	.	0.0011	.	.	.	0.0009	.	.	wrought ~40 mm Ø x ~15 mm		
BAM	M394	.	.	.	.	0.00070	.	.	.	.	.	.	40 mm Ø x 30 mm		
BAM	M394a	.	.	.	.	0.00073	0.00013	.	.	.	.	.	40 mm Ø x 30 mm		
IMN	WD-4	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm		
31X	7835-3K	0.0205	.	.	.	0.0060	0.0107	.	.	.	.	0.0011	chill cast ~40 mm Ø x ~15 mm		
IMN	WD-5	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm		
31X	7835-6D	0.0048	0.0032	.	.	0.0017	.	.	.	(0.001)	(0.001)	0.0007	chill cast ~40 mm Ø x ~15 mm		
BS	857B-1	(0.002)	.	.	.	.	.	.	.	.	.	last	cont. cast 38 mm Ø x 10 or 12 mm		
BS	857B-2	(0.002)	.	.	(0.003)	.	.	.	.	(0.001)	.	(0.004)	cont. cast 38 mm Ø x 12 mm		
BS	857B-3	(0.002)	.	.	(0.003)	.	.	.	.	(0.001)	.	(0.004)	cont. cast 38 mm Ø x 12 mm		
BS	857B-4	(0.002)	.	.	(0.003)	.	.	.	.	(0.001)	.	(0.004)	cont. cast 38 mm Ø x 12 mm		
31X	CZ115A	0.0041	.												

**CRM LEADED BRASS SET**

40 mm Ø x 30 mm

Number	Al	Bi	Cu	Fe	Mn	Ni	P	Pb	Sb	Si	Sn	Zn	
IMN WG1	0.096	0.0013	60.99	0.0084	0.16	0.20	0.029	0.71	(0.062)	(0.0046)	0.29	Rem	available individually
IMN WG2	(0.00095)	0.016	56.99	0.42	(0.0024)	0.0051	.	2.66	(0.0024)	(0.021)	(0.0025)	Rem	available individually
IMN WG3	0.041	0.0057	58.20	0.31	0.037	0.029	0.013	2.29	0.018	(0.014)	0.091	Rem	available in set only
IMN WG4	0.073	0.014	60.05	0.10	0.12	0.16	0.020	1.41	(0.042)	(0.016)	0.21	Rem	# 4 sold out
IMN WG5	0.058	0.0094	59.32	0.18	0.074	0.078	0.016	1.66	0.034	(0.022)	0.14	Rem	available in set only
IMN WG6	0.020	0.023	60.67	0.18	0.21	0.29	0.044	3.70	(0.0078)	(0.019)	0.40	Rem	available individually

**CRM MANGANESE BRASS**

chill cast analysis listed in mass % except \* which is mg/kg 31X: ~40 mm Ø x ~15-18 mm CTIF: 2 Discs 60 mm Ø x 5 mm

Number	Mn	Zn	Cu	Al	Fe	Ni	Pb	Si	Sn	As	Co	P	Sb	Ag*	Bi*	Cd*	Cr*
31X MNB12C *	16.1	21.2	58.3	0.70	0.29	0.696	1.97	0.046	0.171	0.0100	0.012	0.078	0.0101	21	101	22	26
31X B13G	2.84	36.67	60.03	0.0148	0.182	0.212	0.0188	0.032	0.0127	0.0120	.	.	0.0056	.	116	.	.
31X B12G	1.720	36.66	60.51	0.081	0.430	0.491	0.0244	0.0207	0.0229	0.0181	.	.	0.0194	.	198	.	.
31X MNB6C	0.871	28.51	70.01	0.0148	0.0697	0.261	0.016	0.0196	0.0308	0.0107	0.0107	0.0226	0.0128	509	.	.	.

\* 31X MNB12Ca lso contains C:0.009

**CRM MANGANESE BRASS DISC AND ROD SETS**

Number	Al	As	Bi	Cu	Fe	Mn	Ni	P	Pb	Sb	Si	Sn	Zn	availability	Units
IMN MA1	1.51	0.085	0.0020	55.50	0.073	3.37	0.39	0.10	0.16	0.0061	0.071	1.04	Rem	set only	10 mm Ø x 100 mm
IMN MA2	3.35	0.0081	0.0029	60.88	1.27	1.30	0.011	0.015	0.020	0.0019	0.042	0.41	Rem	set only	10 mm Ø x 100 mm
IMN MA3	.	0.029	0.028	57.04	0.55	0.78	0.13	0.040	0.049	0.14	0.50	0.74	Rem	set only	10 mm Ø x 100 mm
IMN MA4	0.33	.	.	57.40	0.20	2.75	0.69	0.15	.	0.20	0.27	0.015	Rem	set only	10 mm Ø x 100 mm
IMN MA5	1.04	0.11	0.020	58.51	0.70	1.97	1.01	0.062	1.20	0.072	0.65	0.046	Rem	set only	10 mm Ø x 100 mm
IMN MA6	2.15	0.013	0.0072	60.45	1.72	0.50	0.056	0.019	0.60	0.016	0.013	0.13	Rem	set only	10 mm Ø x 100 mm
IMN WF1	.	.	0.00059	56.47	0.097	2.16	0.010	(0.0012)	0.010	0.00058	.	0.012	Rem	OK individually	44 mm Ø x 30 mm
IMN WF2	.	.	0.00091	57.66	0.21	1.79	0.040	(0.0032)	0.040	0.0018	.	0.045	Rem	OK individually	44 mm Ø x 30 mm
IMN WF3	.	.	0.0015	58.66	0.29	1.36	0.10	0.0075	0.070	0.0036	.	0.072	Rem	OK individually	44 mm Ø x 30 mm
IMN WF4	.	.	0.0021	60.50	0.42	0.57	0.15	0.0095	0.10	0.0045	.	0.11	Rem	OK individually	44 mm Ø x 30 mm
IMN WF5	.	.	0.0030	58.77	0.68	0.52	0.18	0.014	0.14	0.0061	.	0.16	Rem	set only	44 mm Ø x 30 mm
IMN WF6	.	.	0.00095	59.78	0.05	0.98	0.074	0.0020	0.026	.	.	0.028	Rem	OK individually	44 mm Ø x 30 mm

**NAVAL BRASS**

# = class, where 1 = CRM and 2 = RM CURM: 50 mm Ø x 10-12 mm 31X NB: 42 mm Ø x ~15 mm BS: 38 mm Ø x see below IARM: 38 mm Ø x 3 or 19 mm MP: 39 mm Ø x 25 mm

#	Number	Sn	Pb	Zn	Cu	Al	As	Bi	Fe	Mn	Ni	P	S	Sb	Si	Ag	Other
1	MP 3.00263	0.76	0.0052	39.61	59.42	(0.0025)	Cr:0.0033	0.0020	0.025	0.0011	0.020	0.0036	(0.0021)	0.0077	0.0016	0.0022	Co: (0.0016)
2	CURM 42.25	2.72	0.0023	39.20	57.78	0.021	0.118	<0.001	0.003	0.169	<0.001	0.050	0.005	<0.001	<0.001	.	.
2	C42.25	2.2	<0.01	rem	58.5	0.02	0.10	<0.002	<0.005	0.13	<0.005	0.06	0.001	<0.005	<0.002	.	.
2	CURM 42.23	1.63	0.575	22.13	74.36	0.008	0.168	0.034	0.354	0.019	0.168	0.128	0.045	0.356	0.015	.	.
1	IARM Cu485-18	0.759	1.76	36.5	60.8	(0.002)	(0.055)	.	0.062	0.0013	0.013	.	.	(0.0018)	(0.003)	C: (0.002)	Cd: 0.0005
1	IARM Cu464-21	0.751	0.066	38.5	60.7	0.0006	0.0011	0.0010	0.096	0.0115	0.0084	0.0012	.	0.0016	.	0.0040	.
1	IARM 76D	0.73	1.69	36.8	60.7	(0.002)	(0.004)	0.0011	0.013	0.0006	(0.003)	0.0018	0.0012	0.0040	0.0037	0.0014	Co: 0.0010
1	BS 485A	0.725	1.39	36.2	61.5	0.0022	(0.0003)	.	0.010	(0.001)	0.0017	(0.002)	(0.0005)	(0.006)	(0.005)	C: (0.002)	O: (0.0009)
1	IARM Cu486-18	0.692	1.31	36.5	61.2	(0.0030)	(0.025)	(0.0004)	0.036	(0.0003)	0.032	(0.004)	(0.0030)	(0.0050)	(0.002)	(0.004)	Co: (0.0006)
1	BS 464B	0.69	0.054	38.7	60.5	(0.004)	0.0005	.	0.050	(0.09)	0.0092	(0.002)	0.0005	(0.001)	0.011	~7 or 19mm	O: 0.0013
2	BS 482A	0.65	0.50	38.8	60.0	(0.003)	<0.002	0.020	<0.002	(0.007)	<0.003	<0.002	0.0012	(0.002)	.	.	~7 or 19mm
2	BS 464A	0.62	0.056	38.73	60.6	(0.001)	<0.002	0.013	0.0002	0.004	0.012	0.001	(0.001)	<0.01	.	.	~7 or 19mm
2	CURM 42.21	0.60	0.259	31.61	66.78	0.003	<0.003	0.013	0.119	<0.001	0.120	0.087	0.034	0.25	0.15	.	.
1	IARM 75B	0.59	0.63	38.0	60.63	(0.005)	(0.004)	(0.001)	0.06	(0.003)	0.02	0.003	(0.001)	(0.004)	(0.003)	.	.
2	C42.21	0.54	0.23	rem	66.1	0.005	<0.005	0.012	0.06	<0.005	0.096	0.081	0.007	0.19	0.081	.	.
1	31X NB 1H	0.535	0.504	29.73	68.35	(0.0004)	0.161	0.0065	0.037	0.051	0.520	0.0223	0.0024	0.0057	0.004	.	Co: (0.0006)

BS 464B and BS 485A are 17025, 17034

**CRM NAVAL BRASS SET**

40 mm Ø x 25 mm

Number	Al	Bi	Cu	Fe	Mn	Ni	P	Pb	Sb	Si	Sn	Zn	availability
IMN WK1	0.11	0.014	59.97	0.28	0.13	0.28	0.030	0.17	0.024	0.30	0.11	Rem	ok individually
IMN WK2	0.080	0.011	60.54	0.16	0.088	0.21	0.017	0.33	0.018	0.29	1.34	Rem	ok individually
IMN WK3	0.045	0.0088	62.09	0.066	0.046	0.13	0.017	0.11	0.012	0.16	0.49	Rem	set only
IMN WK4	0.013	0.0052	63.28	0.085	0.020	0.070	0.010	0.050	0.0056	0.082	1.04	Rem	set only
IMN WK5	0.0042	0.0011	64.92	0.0092	0.0056	0.0055	0.0056	0.0062	0.0027	0.0064	0.47	Rem	ok individually

**CRM NICKEL AND PHOSPHOR BRASS**

analysis listed in mass %

Number	Ni	P	Cu	Zn	Al	Cd	Cr	Fe	Mn	Pb	Sn	Units
31X B29A	4.11	3.33	67.08	24.75	0.219	0.0144	0.062	0.144	0.0625	0.146	0.0328	40 mm Ø x ~15 mm
BAM 387	5.020	.	75.18	19.57	.	.	.	0.0617	0.0796	0.00108	0.00301	40 mm Ø x 30 mm

**CRM NICKEL BRASS DISCS**

analysis listed in mass % except \* which is mg/kg

also available as sets

IMN WH, WM: 40 mm Ø x 25 mm

IMN WP: 40 mm Ø x 30 mm

Number	Ni	Zn	Cu	Al	As	Bi	C*	Cd	Co	Fe	Mg	Mn	P	Pb	S	Sb	Si	Sn
IMN WP1	5.45	Rem	67.15	0.020	0.0012	0.00080	.	0.0019	.	0.020	.	0.0069	0.020	0.52	.	0.0010	(0.01)	0.0042
IMN WP2	7.79	Rem	65.08	0.0090	0.0049	0.0052	.	0.0052	.	0.12	.	0.040	0.0067	0.82	.	0.0052	(0.009)	0.11
IMN WP3	10.24	Rem	63.05	0.0020	0.011	0.012	.	0.011	.	0.20	.	0.15	0.0079	1.52	.	0.012	(0.03)	0.18
IMN WP4	12.38	Rem	60.91	0.039	0.015	0.016	.	0.016	.	0.31	.	0.35	0.011	(2)	.	0.015	(0.04)	0.26
IMN WP5	15.63	Rem	58.70	0.049	0.021	0.021	.	0.026	.	0.026	.	0.49	0.0027	(1.8)	.	0.028	(0.03)	0.33
IMN WP6	4.27	Rem	69.37	.	.	.	.	.	.	.	.	.	.	2.41	.	.	.	.
IMN WM1	5.03	25.35	69.06	0.083	0.00026	0.011	44	0.0046	0.021	0.011	0.0054	0.38	0.0018	0.018	0.017	0.00098	0.0026	0.0036
IMN WM2	6.66	24.18	68.41	0.050	0.0030	0.014	52	0.022	0.017	0.022	0.019	0.53	0.023	0.011	0.0058	0.013	0.0067	0.011
IMN WM3	6.09	23.57	69.85	0.033	0.0053	0.0055	58	0.0024	0.011	0.077	0.0042	0.19	0.0052	0.0073	0.0073	0.0043	0.037	0.098
IMN WM4	5.36	23.19	71.10	0.0080	0.0072	0.0029	72	0.0021	0.0099	0.13	0.0027	0.011	0.0057	0.0044	0.0058	0.0059	0.071	0.075
IMN WM5	4.68	25.90	68.99	0.0012	0.0089	0.0007	90	0.00077	0.0021	0.22	0.00056	0.0024	0.016	0.0020	0.0030	0.0068	0.094	0.035
IMN WH1	5.70	Rem	68.16	.	.	.	(46)	.	0.0061	0.0052	.	0.56	0.0029	.	(0.0055)	.	0.010	.
IMN WH2	6.34	Rem	69.14	.	.	.	(58)	.	0.017	0.038	.	0.36	0.0072	.	(0.0071)	.	0.038	.
IMN WH3	3.44	Rem	70.18	.	.	.	(70)	.	0.031	0.11	.	0.25	0.013	.	(0.011)	.	0.072	.
IMN WH4	4.14	Rem	71.15	.	.	.	(75)	.	0.048	0.13	.	0.11	0.015	.	(0.017)	.	0.12	.
IMN WH5	4.89	Rem	72.28	.	.	.	(87)	.	0.028	0.22	.	0.011	0.017	.	(0.021)	.	0.17	.

**SILICON BRASS**

# = class, where 1 = CRM and 2 = RM

Number	Si	Zn	Cu	Al	Fe	Mn	Ni	P	Pb	Sb	Sn
2 CTIF LS2	4.91	11.60	79.60	0.156	1.022	0.220	1.110	0.064	0.886	0.0103	0.338
1 ERM-EB393a	3.35	(20.8)	75.8	0.00021	0.0143	0.00185	0.00297	0.0454	0.0104	(0.000093)	0.00390
2 CTIF LS3	3.3	19	76	0.43	0.10	0.15	0.11	0.011	0.58	0.107	0.15
1 31X WSB6F	3.13	0.0506	95.40	(0.0013)	0.158	0.924	0.0509	0.0179	0.0310	0.0406	0.0142
1 IARM Cu693-21	3.1	21.9	74.8	0.00043	0.028	0.041	0.0019	0.099	0.030	.	0.022
2 HRT CU2021	2.9	10.0	86.6	0.0008	0.019	0.044	0.002	0.081	0.006	0.001	0.006

Number	Ag	As	B	C	Cd	Co	Cr	S	Zr	Units
CTIF LS2	.	.	.	.	.	.	.	.	.	60 mm Ø x 5 mm
ERM-EB393a	.	0.000134	Bi:(0.000019)	.	0.000061	.	0.000156	Se:(0.00047)	.	40 mm Ø x 30 mm
CTIF LS3	.	.	.	.	.	.	.	.	.	60 mm Ø x 5 mm
31X WSB6F	0.0131	0.0110	0.0054	.	0.0039	0.0095	.	.	.	~40 mm Ø x ~15 mm
IARM Cu693-21	.	.	.	.	.	.	0.0006	.	.	38 mm Ø x 3 or 19 mm
HRT CU2021	.	(0.0006)	Bi:0.0006	.	0.0005	.	0.0006	0.001	.	42 mm Ø x 20 mm

**CRM HIGH TENSILE BRASS**

Number	Cu	Zn	Al	Fe	Mn	Si	As	C	Ni	P	Pb	S	Sb	Sn	Units
31X HT31B	67.00	17.06	6.82	3.01	5.69	0.0443	0.0005	0.0057	0.226	0.0030	0.0139	0.0007	E:0.0014	0.079	~40 mm Ø x ~15 mm

**RM BRONZE MUSHROOMS**

chill cast typical analysis 60 mm Ø x 5 mm

Number	Sn	Zn	Cu	Al	As	Fe	Mn	Ni	P	Pb	S	Sb	Si
CTIF B 1	15.15	0.92	82.90	0.072	.	0.088	.	0.063	0.037	0.202	0.030	0.444	0.055
CTIF B 2	13.55	0.11	85.90	(0.002)	.	0.041	.	(0.003)	0.17	0.0206	0.048	(<0.002)	0.17
CTIF B 3	12.8	2.2	80.2	0.1	.	0.2	0.20	1.5	0.45	1.6	0.04	0.2	0.07
CTIF B 4	11.10	1.34	83.75	.	.	0.021	.	0.57	0.52	2.53	0.019	0.10	0.015
CTIF B 14	10.75	0.15	87.00	<0.01	0.04	0.11	0.02	0.30	0.64	0.50	0.02	0.08	0.075
CTIF B 13	10.05	1.09	86.35	0.016	0.065	0.250	0.046	0.50	0.210	0.99	0.070	0.243	0.085
CTIF B 5	9.90	0.42	85.95	0.039	.	0.18	0.082	2.28	0.041	0.48	0.067	0.47	0.049
CTIF B 30	9.80	1.05	77.45	0.063	.	0.115	0.150	0.97	0.063	10.0	0.048	0.22	0.066
CTIF B 12	9.57	0.61	85.65	0.120	0.111	0.162	0.235	2.63	0.525	0.201	0.013	0.117	0.050
CTIF B 11	8.04	2.10	84.75	.	.	0.170	.	2.0	0.057	1.93	0.09	0.70	0.14
CTIF B 31	7.65	0.79	78.65	(0.031)	.	(0.015)	.	0.489	.	11.79	0.028	0.475	(0.047)
CTIF B 23	7.18	1.46	83.45	0.020	.	(0.040)	.	0.086	0.070	7.20	0.019	0.384	0.025
CTIF B 10	6.95	2.75	83.65	0.205	0.0075	0.165	(0.0045)	1.01	0.014	4.07	0.050	1.14	.
CTIF B 20	6.35	3.77	83.35	0.040	.	0.165	.	0.51	0.072	5.10	0.115	0.520	0.055
CTIF B 32	5.92	1.17	74.80	0.075	0.0056	0.11	.	1.49	0.039	16.10	0.027	0.13	0.070
CTIF B 21	5.13	6.17	83.05	0.13	.	0.285	.	1.21	(0.004)	3.79	0.047	0.18	.
CTIF B 22	3.5	4.0	83.0	.	.	<0.10	.	2.5	.	6.0	0.03	0.05	<0.1
CTIF UN 3S	0.215	1.62	92.65	0.11	.	0.30	0.073	3.45	.	0.20	.	.	1.24
Number	Sn	Zn	Cu	Al	As	Fe	Mn	Ni	P	Pb	S	Sb	Si

**BRONZE**

Number	Cu	Fe	Ni	P	Pb	Sn	Zn	method	Units
32X CSN1A	.	0.0020	(0.0001)	0.0007	.	0.306	0.0039	wrought	~20 mm Ø x ~22 mm
SRM 1115	87.9	0.13	0.074	0.005	0.013	0.10	11.7	wrought	31 mm Ø x 19 mm

**CRM ALUMINUM BRONZE SETS**

analysis listed in mass % except \* which is mg/kg

**17034**

40 mm Ø x ~25-30 mm

Number	Al	As	Bi	Cd	Co	Cr*	Fe	Mg*	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	Singly?
IMN BF1	10.90	0.061	0.00042	.	.	.	(6.2)	.	0.0059	2.49	(0.012)	0.23	.	(0.002)	0.26	0.011	0.57	no
IMN BF2	9.96	0.050	0.0025	.	.	.	(5.4)	.	0.12	3.54	0.053	0.15	.	(0.013)	0.25	0.081	0.40	yes
IMN BF3	9.58	0.038	0.0039	.	.	.	4.50	.	0.28	4.43	0.098	0.111	.	0.028	0.20	0.17	0.27	no
IMN BF4	9.12	0.022	0.0057	.	.	.	3.25	.	0.39	5.24	0.13	0.059	.	0.037	0.097	0.25	0.10	yes
IMN BF5	8.35	0.0039	0.010	.	.	.	2.44	.	0.50	6.03	0.16	0.014	.	0.048	0.028	0.35	0.018	yes
IMN BP1	8.935	0.00094	0.00053	0.00054	.	3.7	0.00305	.	0.00535	0.243	0.00055	0.00055	.	0.00052	(0.00544)	0.00043	0.0100	yes
IMN BP2	6.136	0.00215	0.00222	0.00214	.	26.7	0.0184	.	0.0189	1.032	0.00208	0.00238	.	0.00468	0.0220	0.00199	0.024	no
IMN BP3	7.120	0.00980	0.0102	0.00928	.	104	0.0743	.	0.152	1.850	0.06661	0.0103	.	0.0108	0.0804	0.0106	0.176	no
IMN BP4	4.632	0.0238	0.0207	0.0226	.	217	0.0131	.	0.304	2.522	0.0238	0.0229	.	0.0215	0.183	0.0229	0.343	no
IMN BP5	3.769	0.0361	0.0349	0.0356	.	374	0.200	.	0.411	3.528	0.0189	0.0347	.	0.0356	0.266	0.0336	0.459	yes
IMN B01	3.16	0.00033	0.00030	0.00035	.	32.7	0.0158	.	0.0167	0.00517	(0.0004)	0.00384	.	0.00035	(0.00471)	2.54	7.10	yes
IMN B02	4.03	0.00199	0.00197	0.00182	.	3.7	0.00569	.	0.00102	0.00204	0.00227	(0.00214)	.	0.00226	0.00979	1.83	6.26	yes
IMN B03	4.67	0.00662	0.00660	0.00570	.	54.8	0.0752	.	0.00884	0.0683	0.00550	0.0537	.	0.00568	0.0552	1.17	5.07	yes
IMN B04	6.15	0.0115	0.0107	0.00881	.	91	0.137	.	0.00612	0.111	0.0100	0.102	.	0.0104	0.0951	0.704	4.28	yes
IMN B05	7.02	0.0161	0.0152	0.0134	.	145	0.218	.	0.0772	0.0355	0.0155	0.0299	.	0.0152	0.0135	0.117	3.08	yes
<b>IMN B1</b>	2.878	0.0106	0.01250	0.0160	0.0272	.	0.0112	58.2	0.598	6.97	0.00220	0.00245	0.0212	0.00115	(0.11)	(0.11)	0.0203	yes
<b>IMN B2</b>	2.46	0.00890	0.00947	0.0110	0.02000	.	0.0380	98.2	0.4217	6.47	0.0108	0.00432	0.0135	0.00303	(0.091)	(0.080)	0.0378	yes
<b>IMN B3</b>	1.972	0.00718	0.00713	0.00758	0.0135	.	0.1233	65.2	0.2100	5.87	0.0135	0.00810	0.00815	0.00555	(0.047)	(0.049)	0.215	no
<b>IMN B4</b>	1.497	0.003083	0.00417	0.00480	0.00757	.	0.2033	35.3	0.01300	5.492	0.0130	0.01017	0.00485	0.00882	(0.015)	(0.014)	0.3583	no
<b>IMN B1</b>	1.092	0.00182	0.00128	0.00075	0.00240	.	0.278	17.2	0.00298	5.01	0.0190	0.0168	0.00232	0.01038	(0.0071)	(0.0034)	0.507	yes

**ALUMINUM BRONZE - LOW NICKEL**

# = class, where 1 = CRM and 2 = RM

#	Number	Al	Cu	As	Cr	Fe	Mg	Mn	Ni	P	Pb	Si	Sn	Zn
1	IARM Cu954-20	10.48	84.7	0.0007	0.028	3.84	.	0.54	0.30	0.009	0.018	0.029	0.010	0.068
2	IARM Cu954-18	10.36	84.7	(0.0030)	(0.003)	4.23	(0.0013)	0.29	0.134	(0.016)	0.016	0.025	0.047	0.141
1	<b>BS 624</b>	10.2	86.5	<0.01	.	3.02	.	0.16	0.052	<0.005	<0.005	0.019	(0.016)	(0.007)
2	HRT CU2018	10.00	84.06	.	.	3.06	.	2.49	0.04	0.014	(0.021)	0.020	0.014	0.10
1	VS BR1	9.6	.	.	.	3.32	.	1.41	0.015	0.007	0.016	0.041	0.011	0.075
1	VS BR4	9.4	.	.	.	3.38	.	1.51	0.043	.	0.015	0.077	0.008	0.034
2	BS 623	9.24	(88.1)	<0.01	.	2.25	.	0.16	0.10	0.013	<0.01	0.046	0.01	0.05
1	IARM 79C	9.20	87.6	0.003	(0.002)	2.28	.	0.20	0.55	0.006	<0.005	0.033	0.010	0.014
1	IARM 79B	9.19	88.4	.	(0.003)	2.13	.	0.16	0.075	0.005	(0.003)	0.019	0.017	0.013
2	BS 623A	9.12	88.13	(0.006)	.	2.19	.	0.273	0.146	<0.002	0.001	0.014	0.002	0.008
1	VS BR2	8.53	.	.	.	0.101	.	1.77	0.023	0.0083	0.0085	0.038	0.019	0.011
2	CURM 51.14	8.42	88.57	0.44	.	0.72	.	0.55	0.219	0.012	0.003	0.286	0.113	0.656
2	CURM 51.13	7.30	88.79	0.215	.	1.81	.	0.898	0.057	0.022	0.104	0.174	0.270	0.335
1	<b>BS 642B</b>	7.17	89.9	0.0015	0.0014	0.285	0.0032	0.069	0.222	0.004	0.0152	2.15	0.0056	0.128
1	<b>BS 642C</b>	7.13	90.4	0.0008	0.0009	0.11	0.0014	0.0148	0.0363	0.0040	0.0109	2.20	0.0061	0.039
2	C51.13	6.93	Rem	0.21	.	2.05	.	0.77	0.053	0.021	0.12	0.16	0.19	0.30
1	32X 61400A	6.81	89.99	.	.	2.74	0.0050	0.082	0.0242	0.0008	(0.0007)	0.0124	0.301	0.060
1	<b>BS 642D</b>	6.73	91.2	(0.002)	0.0004	0.152	(0.0003)	0.018	0.047	0.0007	0.0038	1.77	0.019	0.093
1	IARMCu642-18	6.5	90.0	.	.	0.039	.	0.0024	(0.014)	(0.009)	0.019	1.96	0.019	1.19
2	CURM 51.12	6.36	88.29	0.111	.	2.87	.	1.33	0.112	<0.001	0.219	0.005	0.196	0.45
1	32X CA12A	6.14	90.48	.	0.0008	0.657	0.0005	0.0290	0.088	.	(0.0017)	2.57	0.0157	0.0405
2	C51.12	6.06	Rem	0.11	.	2.90	.	1.25	0.11	<0.005	0.25	<0.01	0.18	0.42
2	CURM 51.11	5.27	93.95	<0.001	.	0.060	.	<0.001	0.012	0.035	0.33	0.159	0.027	0.111

  

Number	Ag	Be	C	Co	N	O	S	Sb	Zr	Units
IARM Cu954-20	0.00015	.	Bi:0.0012	0.0012	.	.	(0.005)	0.0018	.	38 mm Ø x 3 or 19 mm
IARM Cu954-18	.	Bi:0.0011	(0.007)	0.017	(0.0006)	(0.0010)	(0.0020)	(0.0009)	(0.0004)	31 mm Ø x 2 or 18 mm
<b>BS 624</b>	.	.	0.0041	.	.	(0.0005)	<0.005	<0.01	.	44 mm Ø x ~7 or 19+ mm
HRT CU2018	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm
VS BR1	.	.	.	.	.	.	.	.	.	38 mm Ø x 18 mm
VS BR4	.	.	.	.	.	.	.	.	.	38 mm Ø x 18 mm
BS 623	.	.	(0.002)	.	.	.	(0.001)	<0.01	.	37 mm Ø x 12 mm last
IARM 79C	<0.005	.	0.003	<0.005	.	.	<0.001	<0.005	.	31 mm Ø x 2 or 18 mm
IARM 79B	0.002	.	0.002	(0.002)	.	.	(0.001)	.	.	31 mm Ø x 2 or 18 mm
BS 623A	.	.	(0.002)	.	.	.	(0.00005)	<0.002	.	38 mm Ø x ~7 or 19+ mm
VS BR2	.	.	.	.	.	.	.	(0.004)	.	38 mm Ø x 18 mm
CURM 51.14	.	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm
CURM 51.13	.	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm
<b>BS 642B</b>	.	(0.005)	0.0013	(0.005)	(0.0005)	(0.0005)	(0.0005)	0.0004	(0.0005)	38 mm Ø x ~7 or 19 mm
<b>BS 642C</b>	.	(0.005)	(0.005)	(0.005)	(0.005)	(0.0005)	(0.005)	(0.0005)	(0.0005)	38 mm Ø x ~7 or 19 mm
C51.13	.	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm
32X 61400A	0.0010	.	.	.	.	.	.	(0.0004)	.	~45 mm Ø x ~15 mm
<b>BS 642D</b>	0.0011	.	0.0011	(0.0007)	(0.0005)	0.0007	(0.0003)	(0.001)	(0.0001)	38 mm Ø x ~7 or 19+ mm
IARMCu642-18	.	.	.	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm
CURM 51.12	.	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm
32X CA12A	0.0010	.	(0.002)	(0.0003)	.	.	.	.	.	42 mm Ø x 18 mm
C51.12	.	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm
CURM 51.11	.	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm

**17025, 17034**

**17025**

**17025, 17034**

**ALUMINUM BRONZE - HIGH NICKEL**

# = class, where 1 = CRM and 2 = RM

#	Number	Al	Cu	As	Cr	Fe	Mg	Mn	Ni	P	Pb	Si	Sn	Zn
2	BS 955C	10.68	80.6	(<0.002)	.	4.04	.	0.06	4.31	0.012	0.003	0.025	0.003	0.15
1	IARM Cu954-21	10.55	85.1	.	0.022	3.66	0.0013	0.393	0.105	0.0031	0.012	0.029	0.0053	0.029
1	IARM Cu955-18	10.37	80.8	(0.0020)	0.008	3.50	.	0.77	4.5	(0.013)	0.006	(0.022)	0.0056	0.038
2	BS 954C	10.21	83.9	(0.006)	.	3.9	.	0.29	1.38	0.011	0.050	0.07	0.08	0.09
2	BS 954B	10.20	83.9	(0.005)	.	3.90	.	0.27	1.38	0.012	0.047	0.07	0.07	0.10
2	HRT CU2001	10.05	79.09	.	.	4.79	.	0.36	4.94	0.011	0.015	0.08	0.018	0.17
2	C52.51	10.0	Rem	.	<0.01	4.3	<0.01	<0.01	5.1	.	<0.01	<0.01	<0.01	0.02
2	HRT CU2009	9.93	78.88	.	.	3.73	.	0.29	6.22	0.010	0.037	0.19	0.020	0.54
1	IARM 334B	9.91	80.8	(0.003)	(0.004)	3.7	(0.001)	0.60	4.70	0.005	0.006	0.075	0.019	0.122
1	<b>BS 630C</b>	9.90	80.7	0.0007	0.0030	3.82	0.0011	0.325	4.82	0.0043	0.0093	0.064	0.0152	0.234
1	MP 3.00243	9.80	80.54	.	.	3.81	.	0.63	4.84	0.0067	0.0058	0.070	0.012	0.054
1	<b>BS 630B</b>	9.78	80.8	0.0007	0.0017	3.90	0.0009	0.281	4.88	0.0028	0.0056	0.0166	0.0289	0.254
1	IARM 334A	9.76	80.7	(0.004)	(0.01)	3.82	(0.001)	0.69	4.77	(0.005)	0.010	0.073	0.025	0.110
1	IARM 80D	9.67	(81.7)	(0.009)	(0.005)	2.99	(0.003)	0.346	5.01	(0.005)	(0.005)	0.025	0.093	(0.007)
1	VS BR3	9.6	.	.	.	4.00	.	0.227	3.85	(0.003)	0.007	0.071	0.005	0.009
2	BS CC954	9.28	84.0	0.003	.	3.61	.	0.353	1.12	0.013	0.13	0.092	0.061	1.30
2	C52.56	8.9	Rem	.	0.14	4.6	0.09	0.74	5.6	.	0.17	0.15	0.11	0.28
1	32X ALB 12A	8.29	82.90	.	.	1.094	0.0013	0.958	6.33	0.0101	0.0018	0.0202	0.310	0.0625
2	<del>EURM 52.54</del>	<del>7.85</del>	<del>81.59</del>	.	<0.005	<del>3.31</del>	<0.005	<del>1.20</del>	<del>5.40</del>	.	<del>0.086</del>	<del>0.022</del>	<del>0.135</del>	<del>0.39</del>
1	32X ALB 13A	7.09	84.96	.	.	1.171	.	5.39	1.381	0.009	(0.0009)	0.086	0.0072	0.0194

Number	Ag	Be	Bi	C	Co	S	Sb	Se	Units
BS 955C	0.014	.	.	.	.	.	(<0.002)	.	38 mm Ø x ~7 or 19+ mm
IARM Cu954-21	0.0012	.	(0.0009)	.	(0.002)	(0.0019)	(0.0019)	.	38 mm Ø x 3 or 19 mm
IARM Cu955-18	0.0019	.	.	(0.0080)	0.0027	(0.0012)	(0.0020)	.	31 mm Ø x 2 or 18 mm
BS 954C	.	.	.	(0.004)	.	(<0.0005)	<0.003	.	38 mm Ø x ~7 or 19+ mm
BS 954B	.	.	.	(0.005)	.	(<0.0005)	(0.001)	.	38 mm Ø x ~7 or 19+ mm
HRT CU2001	.	.	.	.	.	0.003	.	.	40 mm Ø x 20 mm
C52.51	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm
HRT CU2009	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm
IARM 334B	0.0013	(0.001)	(0.001)	0.005	(0.003)	0.0008	(0.004)	(0.004)	31 mm Ø x 2 or 18 mm
<b>BS 630C</b>	.	(<0.0005)	.	0.0060	0.0019	(<0.0005)	0.0003	last	38 mm Ø x 19 mm <b>17025</b>
MP 3.00243	.	.	.	.	.	.	.	.	57 mm Ø x 26 mm
<b>BS 630B</b>	.	(<0.0005)	.	0.0067	0.0017	0.0013	(<0.0005)	last	38 mm Ø x ~7 or 19 mm <b>17025</b>
IARM 334A	(0.001)	(0.001)	(0.001)	0.0058	(0.003)	0.0007	0.004	.	31 mm Ø x 2 or 18 mm
IARM 80D	(0.04)	<0.002	(0.004)	(0.004)	0.022	(0.003)	<0.02	<0.03	31 mm Ø x 2 or 18 mm
VS BR3	.	.	.	.	.	.	.	.	38 mm Ø x 18 mm
BS CC954	.	.	.	(0.007)	.	(0.002)	0.004	.	32 mm Ø x 17 mm
C52.56	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm
32X ALB 12A	0.044	.	.	.	0.0056	.	.	(0.0007)	~41 mm Ø x ~15 mm
<del>EURM 52.54</del>	.	.	.	.	.	.	.	.	<del>50 mm Ø x 10 - 12 mm</del>
32X ALB 13A	.	.	.	.	0.0011	.	.	(0.0007)	~35 mm Ø x ~15 mm

**Need a larger size?  
Most BS items are  
available in any height.**

**RM ALUMINUM BRONZE MUSHROOMS**

chill cast	typical analysis												60 mm Ø x 5 mm
Number	Al	Cu	Fe	Mn	Ni	Pb	Si	Sn	Zn	Bi	Cd	Cr	Mg
CTIF CA 36	12.60	77.25	2.93	0.131	6.33	0.0154	0.113	0.201	0.244	0.058	.	0.041	0.130
CTIF 4065-P	11.85	81.20	3.40	0.075	3.18	0.03	0.034	0.18	0.03	.	.	.	.
CTIF CA 35	11.4	75.6	6.1	1.6	3.80	0.10	0.25	0.30	0.55	.	.	.	.
CTIF CA 13	11.20	82.45	3.82	1.22	0.50	0.0230	0.11	(0.01)	0.65	.	.	.	.
CTIF CA 3	10.9	86.5	0.80	0.06	0.80	0.15	0.08	0.20	0.30	.	.	.	.
CTIF CA 21	10.82	81.9	3.45	0.30	3.09	0.05	0.07	0.07	0.100	.	0.0095	.	.
CTIF CA11	10.54	84.45	1.27	0.779	1.95	0.109	0.254	0.258	0.211	.	.	.	0.125
CTIF CA 22	10.45	80.50	2.51	0.745	4.54	0.0243	0.32	0.30	0.605	.	.	.	.
CTIF 3011-G	10.35	84.80	1.98	0.165	2.00	0.10	0.16	0.125	0.25	.	.	.	.
CTIF CA 27	10.25	81.1	2.81	1.195	3.88	0.11	0.127	0.054	0.428	.	0.012	.	.
CTIF CA 10	10.15	80.65	4.55	0.333	3.39	0.16	0.46	0.16	0.067	.	.	.	.
CTIF 3299-J	10.10	87.60	0.38	1.12	0.21	0.110	0.136	0.106	0.19	.	.	.	.
CTIF 3297-Y	10.00	87.45	1.88	0.03	.	0.11	0.15	0.10	0.27	.	.	.	.
CTIF CA37	9.84	76.79	6.85	0.752	4.98	0.0503	0.040	0.147	0.364	0.0118	.	0.085	0.077
CTIF 4149-G	9.84	84.95	2.00	0.21	1.96	0.15	0.18	0.34	0.37	.	.	.	.
CTIF 2152-S	9.78	85.05	3.99	0.42	0.68	<0.005	0.015	.	<0.01	.	.	.	.
CTIF 2151-R	9.43	84.75	4.48	0.73	0.56	<0.005	0.015	<0.01	<0.01	.	.	.	.
CTIF 3296-L	9.40	88.55	0.07	0.37	0.41	0.30	0.20	0.06	0.62	.	.	.	.
CTIF CA 31	9.15	76.5	3.18	3.27	7.51	0.020	0.064	0.063	0.145	.	.	.	0.02
CTIF CA 26	9.10	81.25	4.36	0.188	4.87	0.058	0.035	0.005	0.038	.	0.034	.	.
CTIF 3300-M	8.73	89.5	0.45	0.165	0.205	0.205	0.415	0.205	0.085	.	.	.	.
CTIF 3301-Z	8.10	87.30	4.00	0.26	0.125	0.032	0.057	0.028	0.06	.	.	.	.
CTIF 2794-H	8.0	90.3	0.82	<0.01	0.69	<0.01	0.048	0.105	<0.01	.	.	.	.
CTIF CA 20	8.00	87.15	0.79	1.85	1.18	0.18	0.17	0.19	0.41	.	0.05	.	.
CTIF CA 12	8.0	84.1	2.77	3.09	1.385	0.047	0.058	0.036	0.45	.	.	.	.
CTIF CA 25	7.97	79.12	6.10	0.51	5.74	0.03	0.084	0.177	0.252	.	.	.	.
CTIF CA 30	7.55	81.6	5.2	2.05	3.10	0.142	0.15	0.099	0.066	.	.	.	.
CTIF 3018-F	7.25	81.90	4.45	1.57	4.50	0.02	0.085	0.06	0.06	.	.	.	.
CTIF 3610-Q	7.10	82.32	3.98	0.045	5.40	0.23	0.065	0.25	0.51	.	0.090	.	.

**CRM BISMUTH BRONZE**

Number	Bi	Cu	Ni	P	Pb	Sn	Zn	Al	Fe	O	S	Sb	Se	Units
IARM CuB1-18	4.51	88.98	0.58	0.049	0.015	5.58	0.47	(0.0012)	(0.0016)	(0.003)	(0.0020)	(0.003)	(0.0025)	31 mm Ø x 2 mm or 18 mm

**MANGANESE BRONZE**

# = class, 1=CRM and 2=RM \* Provisional Analysis BS 675B, 863B, 675A: 38 Ø x ~7 to 19+ mm BS 675: 38 Ø x 12 mm IARM: 31 Ø x 2 or 18 mm

#	Number	Mn	Al	Fe	Sn	Zn	Cu	As	C	Co	Cr	Ni	P	Pb	S	Sb	Si
1	<b>BS 863B</b>	2.97	5.25	2.84	0.033	26.1	[62.4]	0.0004	0.0028	0.0009	0.0042	0.081	0.0010	0.0205	0.0007	0.0012	0.0103 last
1	IARM 88C	2.99	5.79	2.98	0.147	22.86	64.5 only in 2mm	0.005	0.0010	0.008	0.276	0.020	0.133	0.0010	(0.003)	0.091	
2	BS 675A	0.32	<0.002	1.12	0.8	39.1	58.5	0.003	(0.0007)	.	.	0.019	0.010	0.074	(0.0005)	0.0011	(0.005)
1	<b>BS 675B</b>	0.175	(<0.005)	1.10	0.92	39.3	58.7	0.0009	(<0.001)	(0.0002)	(0.0002)	0.0071	0.0020	0.071	0.0002	0.0011	(<0.005)
1	BS 675C *	0.17	<0.05	0.90	0.58	39.0	[59.1]	<0.005	0.0009	<0.005	<0.005	0.010	0.005	0.077	<0.005	<0.05	0.007
1	IARM 83B	0.13	0.002	0.97	0.85	39.3	58.7	.	0.003	.	.	0.010	0.004	0.017	(0.001)	(0.004)	(0.003)
2	BS 675	0.11	<0.01	0.73	0.92	39.7	Rem.	<0.005	(0.0004)	.	last	<0.01	<0.01	<0.01	(0.0013)	<0.01	<0.02

**BS 675B and 863B are 17025**

**CRM NICKEL BRONZE SET**

available in SET/5 or individually analysis listed in mass % 40 mm Ø x ~30 mm

Number	Al	Bi	Cu	Fe	Ni	P	Pb	S	Sb	Se	Si	Sn	Zn
IMN BN1	0.00286	0.118	rem	0.495	0.226	0.123	0.0239	0.113	0.117	0.00335	(0.00839)	6.47	0.135
IMN BN2	0.00371	0.0707	rem	0.589	1.64	0.0769	0.00514	0.213	0.0656	0.0104	.	6.21	0.369
IMN BN3	0.00126	0.00098	rem	0.153	1.04	0.00038	0.0054	(0.0017)	0.0088	.	.	9.29	0.0625
IMN BN4	0.00055	0.00595	rem	0.0216	0.635	0.0066	0.0145	0.112	0.0055	0.0134	(0.00064)	9.81	0.00771

**Need a larger size?  
Most BS items are  
available in any height.**

**PHOSPHOR BRONZE**

# = class, where 1 = CRM and 2 = RM

#	Number	P	Sn	Zn	Cu	Mn	Ni	Pb	Al	As	Fe	Mg	S	Sb	Si
1	32X PB11H	0.89	3.07	1.53	91.3	0.0404	0.70	1.07	0.070	0.187	0.377	0.015	0.011	0.446	0.084
1	<b>BS 510C</b>	0.335	5.43	0.13	94.1	<0.001	0.015	0.0051	(0.0009)	<0.005	0.0042	.	0.0019	<0.01	0.0028
1	32X 51000A	0.300	4.85	0.0105	94.87	.	0.0084	0.0032	0.0007	.	0.0024	.	0.0021	.	.
1	33X 54400A	0.243	3.97	3.87	86.79	.	0.244	4.69	0.0009	0.0156	0.072	.	0.0251	0.0362	.
1	IARM 78B	0.19	4.73	3.55	87.7	(0.002)	0.077	3.87	(0.002)	<0.003	0.02	.	0.010	0.01	<0.002
1	IARM Cu510-18	(0.16)	4.54	0.0034	95.2	(0.0010)	(0.017)	(0.0027)	(0.0004)	(0.0007)	(0.0008)	.	(0.0020)	(0.0008)	(0.0050)
1	IARM 77B	0.148	4.66	0.007	95.2	(0.002)	0.002	0.016	(0.001)	(0.001)	0.002	.	0.002	0.005	(0.003)
1	32X 52100A	0.146	7.73	0.0026	92.10	.	0.0111	0.0031	0.0009	0.0009	0.0008	.	0.0008	.	.
2	BS 510A	0.11	4.6	0.21	95.10	<0.002	0.020	0.016	<0.002	0.0008	0.005	.	0.008	(0.003)	<0.003
2	CURM 54.02	0.107	5.53	0.410	92.87	0.101	0.109	0.663	0.020	0.023	0.102	0.0020	0.030	0.026	0.012
1	32X PB15B	0.104	2.04	0.75	.	0.0006	0.145	0.046	0.064	0.102	0.044	0.023	0.0016	0.020	.
1	32X PB13E	0.089	6.55	0.301	92.48	0.0440	0.0953	0.109	0.0251	0.0391	0.0549	.	.	0.092	0.053
1	<b>BS 510B</b>	0.074	4.6	0.251	[95.0]	0.0004	0.0211	0.0112	(0.006)	0.0010	0.009	.	0.007	(0.002)	(0.003)
1	IARM Cu544-18	0.069	4.14	3.80	88.0	.	0.019	3.92	.	.	(0.010)	.	.	.	.
2	CURM 54.01	0.053	3.17	0.346	95.42	0.158	0.348	0.307	0.040	0.044	0.028	0.008	0.023	0.070	0.039
2	HRT CU2016	0.050	7.23	0.006	92.67	.	0.007	0.006	.	.	0.004	.	0.003	0.006	.
2	C54.01	0.05	3.2	0.31	Rem	0.13	0.26	0.29	0.009	0.04	.	<0.001	0.03	0.08	0.006
1	<b>BS 544B</b>	0.0258	4.06	3.51	88.2	(0.0009)	0.068	3.9	(0.0009)	0.0043	0.087	.	0.0249	0.0244	0.0042
1	32X PB17A	0.017	21.8	0.0188	77.3	.	0.044	0.213	.	0.175	0.0009	.	0.0220	0.051	.
1	<b>BS 544C</b>	0.0092	4.10	3.78	88.4	<0.005	0.153	3.31	<0.05	(0.008)	0.055	.	0.058	0.0045	0.0029
1	32X PB16A	0.0073	17.60	0.0082	82.02	.	0.127	0.088	(0.0006)	0.0035	(0.001)	.	0.0049	0.013	0.005

Number	Ag	Bi	C	Co	Cr	N	O	Se	Units
32X PB11H	B:0.0021	0.023	.	0.034	.	.	.	.	~40 mm Ø x ~15 mm
<b>BS 510C</b>	(0.004)	.	(0.0010)	0.0008	<0.005	.	0.0006	.	38 mm Ø x ~7 or 19+ mm <b>17025, 17034</b>
32X 51000A	0.0022	.	.	.	.	.	.	.	38 mm Ø x ~15 mm
33X 54400A	0.0124	.	.	0.0013	.	.	.	.	~38 mm Ø x ~15 mm
IARM 78B	.	.	.	.	.	.	.	.	31 mm Ø x 2 mm
IARM Cu510-18	0.0019	.	(0.0018)	.	.	.	0.0011	.	31 mm Ø x 2 or 18 mm
IARM 77B	.	.	0.003	.	.	.	.	.	31 mm Ø x 2 or 18 mm
32X 52100A	0.0011	0.0019	.	.	.	.	.	.	38 mm Ø x ~15 mm
BS 510A	.	.	(0.0006)	.	.	.	.	.	38 mm Ø x ~5-7 or 12 mm last
CURM 54.02	.	.	.	.	.	.	.	.	50 mm Ø x 10-12 mm
32X PB15B	.	(0.0002)	.	0.037	0.0004	.	.	(0.0008)	~40 mm Ø x ~15 mm
32X PB13E	0.0205	0.0224	.	0.0088	.	.	.	.	~40 mm Ø x ~15 mm
<b>BS 510B</b>	Zr: (0.0004)	0.0010	(0.0006)	(0.0008)	(0.0001)	0.0009	.	.	38 mm Ø x ~7 or 19+ mm <b>17025</b>
IARM Cu544-18	.	.	.	.	.	.	.	.	38 mm Ø x ~3 or 19 mm
CURM 54.01	.	.	.	.	.	.	.	.	50 mm Ø x 10-12 mm
HRT CU2016	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm
C54.01	.	.	.	.	.	.	.	.	50 mm Ø x 10-12 mm
<b>BS 544B</b>	0.0173	.	0.0031	(0.0012)	(0.0007)	(0.0007)	0.0005	.	38 mm Ø x ~7 or 19+ mm <b>17025</b>
32X PB17A	0.017	0.026	.	0.0018	(0.0004)	.	0.0022	0.0022	~40 mm Ø x ~15 mm
<b>BS 544C</b>	<0.005	.	0.0018	(0.0020)	<0.005	.	0.0006	.	38 mm Ø x ~7 or 19+ mm <b>17025, 17034</b>
32X PB16A	0.0166	0.0530	.	(0.0004)	.	.	.	Te: (0.002)	~40 mm Ø x ~15 mm

**SILICON BRONZE**

# = class, where 1 = CRM and 2 = RM

#	Number	Si	Cu	Mn	Al	As	C	Cr	Fe	Ni	P	Pb	Sn	Zn
1	<b>BS 655B</b>	3.25	95.7	0.928	(0.005)	0.0004	0.0012	0.0006	0.042	0.0043	0.0047	0.0205	0.0053	0.0248
1	<b>BS 655C</b>	3.22	95.6	0.958	(0.005)	0.0006	(0.0005)	0.0021	0.052	0.0030	0.0035	0.0047	0.0049	0.0152
1	IARM 82B	3.22	95.3	1.04	0.002	<0.002	(0.003)	0.004	0.080	0.011	0.004	0.011	0.017	0.38
1	IARM Cu655-18	3.15	95.5	0.98	(0.0020)	(0.0004)	(0.0100)	.	0.055	0.0034	(0.0020)	(0.018)	0.009	0.149
2	BS 655A	3.14	95.74	0.91	(0.002)	<0.002	(0.0006)	.	0.075	0.008	(0.004)	0.008	0.07	0.02
1	37X 65500A	3.13	95.75	0.960	0.0028	.	(0.0044)	0.0029	0.035	0.0059	0.0046	0.0034	0.0426	0.0353
1	IARM Cu647-18	0.70	(96.5)	(0.099)	0.0027	.	.	.	(0.0056)	2.69	(0.02)	(0.007)	(0.01)	(0.005)

Number	Be	Co	Mg	N	O	S	Sb	Zr	Units
<b>BS 655B</b>	(0.0005)	(0.005)	(0.0005)	(0.0005)	(0.0005)	0.0010	0.0002	(0.0005)	38 mm Ø x ~7 or 19+ mm <b>17025</b>
<b>BS 655C</b>	(0.0005)	(0.005)	(0.0005)	(0.0005)	(0.0001)	0.0007	(0.0005)	.	38 mm Ø x ~7, ~12 or 19+ mm <b>17025</b>
IARM 82B	.	.	.	<0.0005	(0.001)	0.003	<0.01	.	31 mm Ø x 2 mm last
IARM Cu655-18	.	Ag: (0.0015)	.	.	.	(0.0010)	(0.0008)	.	31 mm Ø x 2 or 18 mm
BS 655A	.	.	.	.	.	(0.0006)	<0.002	.	38 mm Ø x ~7, 12 or 19+ mm
37X 65500A	0.0014	.	.	.	.	0.0010	.	.	~38 mm Ø x ~15 mm
IARM Cu647-18	.	.	(0.0086)	.	.	.	.	0.044	31 mm Ø x 2 or 18 mm

## LEADED, TIN, AND LEADED TIN BRONZE CHART 1 of 2

# = class, where 1 = CRM and 2 = RM

#	Number	Sn	Pb	Zn	Cu	Al	Fe	Mn	Ni	P	S	Sb	Si
1	32X SN5C	16.7	0.27	0.815	77.2	0.89	0.95	1.19	0.382	0.017	0.0015	0.69	0.016
2	CTIF B1	15.15	0.202	0.92	82.90	0.072	0.088	.	0.063	0.037	0.030	0.444	0.055
1	IARM 310A	10.56	0.064	0.10	89.2	0.0009	0.006	(0.001)	0.043	0.094	0.0021	(0.002)	(0.001)
2	CURM 50.02	10.34	10.67	0.006	78.84	.	.	.	.	0.046	.	.	.
1	32X 52480A	10.33	0.329	0.397	88.54	.	0.020	.	0.369	0.0103	0.0071	0.0182	(0.002)
2	BS 905A-2	10.3	0.032	2.3	[87.3]	(<0.005)	0.014	(<0.005)	0.018	0.056	(0.004)	0.004	(<0.005)
2	BS 905A-3	10.3	0.033	2.3	[87.3]	(<0.005)	0.013	(<0.005)	0.018	0.052	(0.004)	0.004	(<0.005)
2	BS 905A-4	10.3	0.033	2.2	[87.3]	(<0.005)	0.012	(<0.005)	0.018	0.049	(0.004)	0.004	(<0.005)
2	BS 905A-1	10.25	0.030	2.27	87.3	(<0.003)	0.015	(<0.003)	0.018	0.055	.	0.004	(<0.004)
1	32X Sn7-22	10.0	1.28	0.025	87.4	.	.	.	1.22	0.030	0.003	0.0045	.
1	<b>BS 937C</b>	9.99	9.15	0.196	80.0	(0.0008)	0.0033	(0.0007)	0.26	0.0009	0.025	0.55	(0.002)
1	32X 93700A	9.95	8.38	0.78	80.43	.	0.0011	.	0.307	(0.0015)	0.0017	0.0051	.
1	IARM 92C	9.65	9.42	0.146	80.35	0.0013	(0.008)	(0.0016)	0.170	0.073	0.026	0.078	(0.0019)
2	HRT CU2017	9.24	8.91	0.37	80.11	.	0.011	.	1.25	0.007	0.026	0.14	.
1	<b>BS 929</b>	9.07	1.98	0.0055	85.3	(<0.00005)	0.0030	(<0.00005)	3.37	0.119	0.0026	0.0146	(<0.001)
1	NCS HS45743	9.06	4.20	1.39	Rem	0.028	0.100	.	0.056	0.38	.	0.206	0.020
2	CURM 50.01	9.01	11.13	0.91	75.38	<0.0005	0.074	<0.001	1.93	0.069	0.188	0.50	<0.001

#	Number	Sn	Pb	Zn	Cu	Al	Fe	Mn	Ni	P	S	Sb	Si
	Number	Ag	As	Bi	C	Cd	Co	Cr	Mg	Se	Te	Units	
	32X SN5C	0.082	0.053	0.097	Au:0.011	0.121	0.110	0.011	.	(0.0009)	(0.0013)	~40 mm Ø x ~15 mm	
	CTIF B1	.	.	.	.	.	.	.	.	.	.	60 mm Ø x 5 mm	
	IARM 310A	0.0020	(0.002)	(0.001)	(0.005)	(0.001)	0.0011	(0.001)	.	(0.001)	.	31 mm Ø x 2 or 18 mm	
	CURM 50.02	.	.	.	.	.	.	.	.	.	.	50 mm Ø x 10-12 mm	
	32X 52480A	0.0131	.	0.0013	.	.	.	.	.	.	.	~40 mm Ø x ~15 mm	
	BS 905A-2	0.002	0.002	.	(0.002)	.	.	.	.	.	.	38 mm Ø x 12 mm	
	BS 905A-3	(0.002)	0.002	.	(0.001)	.	.	.	.	.	.	38 mm Ø x 12 mm	
	BS 905A-4	(0.002)	0.002	.	(0.002)	.	.	.	.	.	.	38 mm Ø x 12 mm	
	BS 905A-1	(0.002)	(0.001)	.	.	.	.	.	.	.	.	38 mm Ø x 12 mm	
	32X Sn7-22	0.008	.	0.0028	.	.	.	.	.	.	.	38 mm Ø x 19 mm	
	<b>BS 937C</b>	(0.015)	0.0112	(0.018)	(0.0015)	(0.0002)	0.0006	(0.00004)	O:0.0060	(0.0008)	(0.0005)	38 mm Ø x 19+ mm <b>17025</b>	
	32X 93700A	.	.	.	.	.	0.0004	.	.	.	.	~42 mm Ø x ~15 mm	
	IARM 92C	(0.05)	(0.005)	(0.011)	(0.002)	.	(0.0007)	(0.0007)	.	(0.001)	.	31 mm Ø x 2 or 18 mm	
	HRT CU2017	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	
	<b>BS 929</b>	(<0.005)	0.0017	(<0.005)	(<0.005)	.	0.0031	(<0.005)	.	O:0.0031	.	51 mm Ø x ~7 or 19+ mm <b>17025</b>	
	NCS HS45743	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm	
	CURM 50.01	0.19	.	0.024	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm	
	Number	Ag	As	Bi	C	Cd	Co	Cr	Mg	Se	Te	Units	

LEADED, TIN, AND LEADED TIN BRONZE CHART 2 of 2

# = class, where 1 = CRM and 2 = RM

#	Number	Sn	Pb	Zn	Cu	Al	Fe	Mn	Ni	P	S	Sb	Si
1	<b>BS 929MOD</b>	8.9	2.9	0.25	84.2	(0.13)	0.11	0.007	3.34	(0.011)	(0.014)	(0.026)	0.0057
1	<b>BS 903E</b>	8.63	0.100	4.11	87.0	(0.001)	0.0072	.	0.293	0.056	0.0092	0.010	(0.0018)
2	CURM 50.03	8.41	8.86	1.72	77.42	0.005	0.018	0.037	2.89	0.159	0.064	0.24	0.005
1	IARM Cu903-18	8.3	(0.066)	4.6	86.5	(0.0010)	(0.012)	(0.0004)	0.41	(0.060)	(0.0017)	(0.002)	(0.0040)
2	BS 903B	7.9	0.10	4.39	86.7	(0.001)	0.049	0.0004	0.50	0.073	0.006	0.003	0.002
2	BS 938-1	7.16	14.8	0.26	77.1	(<0.002)	(0.015)	(0.001)	0.49	(0.059)	0.009	0.033	(<0.004)
1	<b>BS 936</b>	6.99	10.7	0.244	81.5	0.0007	0.0026	(0.0006)	0.36	(0.053)	0.009	0.102	0.0040
1	32X LB10-22	6.8	11.3	0.50	.	.	.	.	0.172	0.019	0.014	0.212	.
1	IARM Cu932-18	6.82	7.95	3.44	81.2	(0.0007)	0.070	.	0.454	0.040	0.031	0.31	.
1	IARM 91E	6.69	7.59	3.68	81.3	0.0015	0.110	0.0007	0.300	0.026	0.028	0.168	0.0021
1	<b>BS 932G</b>	6.35	7.78	2.92	82.0	(0.002)	0.028	(0.0005)	0.39	0.11	0.035	0.173	0.0014
1	<b>BS 932H</b>	6.28	7.62	2.79	82.4	0.0020	0.019	(0.0005)	0.41	(0.11)	0.038	0.185	(0.002)
1	IARM 184A	6.0	19.0	0.37	(74)	0.0016	(0.003)	(0.002)	0.30	0.008	0.021	0.27	(0.002)
1	32X LB13D	5.98	7.04	0.77	85.1	0.0014	0.0159	.	0.629	0.033	0.074	0.092	0.008
1	BAM 377	5.92	0.00449	0.01006	94.04	0.00451	0.01042	0.000921	0.01074	(<0.0010)	(0.00068)	0.00130	(0.0134)
2	BS 922B-1	5.8	1.33	3.95	88.4	(0.001)	0.010	(0.002)	0.61	0.037	.	0.002	(0.001)
2	BS 922B-2	5.8	1.33	3.91	88.4	(0.001)	0.008	(0.002)	0.61	0.031	.	0.002	(0.001)
2	BS 922B-4	5.8	1.33	3.82	88.4	(0.001)	0.007	(0.002)	0.61	0.021	.	0.002	(0.001)
2	BS 922B-5	5.8	1.33	3.78	88.4	(0.001)	0.006	(0.002)	0.61	0.017	.	0.002	(0.001)
1	BAM 378	5.738	(0.00042)	(0.00073)	94.13	(<0.0001)	0.0182	(0.000074)	0.00183	0.0602	(0.00091)	0.00861	(<0.0010)
1	32X LB14H	5.16	15.04	0.254	78.4	0.0008	0.041	.	0.300	0.039	0.036	0.103	0.0012
1	IARM 267A	4.95	0.026	2.06	87.8	0.003	0.019	(0.002)	5.1	0.037	0.0014	<0.03	0.003
1	<b>BS 836D</b>	4.82	4.9	4.84	84.8	0.0011	0.026	(0.0002)	0.370	0.086	0.039	0.108	0.0027
1	<b>BS 836B</b>	4.71	4.6	4.85	85.2	0.0015	0.022	(0.0007)	0.377	0.096	0.036	0.102	(0.0032)
1	<b>BS 836C</b>	4.7	4.72	4.91	85.0	(0.0015)	0.017	(0.0007)	0.370	0.066	0.038	0.104	0.0032
1	32X LB15F	4.53	20.15	0.147	74.5	0.0009	0.0039	.	0.104	0.063	0.021	0.198	0.0018
2	HRT CU2022	4.04	2.54	5.44	87.4	(0.001)	0.0304	.	0.433	0.0204	0.0235	0.0477	0.0027
1	BAM M397	3.99	0.229	1.96	.	.	.	.	0.336	.	0.45	0.097	.
1	BAM M397a	3.9	0.227	1.87	.	.	.	.	0.337	.	0.45	0.097	.
1	IARM 72B	0.029	1.99	7.81	90.08	.	0.007	.	0.004	0.005	0.0015	0.006	(0.002)
1	IARM Cu314-21	0.0102	1.51	8.6	89.9	0.0006	0.032	0.0164	0.0048	0.0022	0.0024	0.0006	0.006

#	Number	Sn	Pb	Zn	Cu	Al	Fe	Mn	Ni	P	S	Sb	Si	
	Number	Ag	As	Bi	C	Cd	Co	Cr	Mg	Se	Te	Units		
	<b>BS 929MOD</b>	.	0.0020	.	(0.003)	.	(0.0017)	.	O:0.0007	.	.	51 mm	Ø x ~7 or 19+ mm	<b>17025, 17034</b>
	<b>BS 903E</b>	.	(0.002)	.	(0.002)	.	(0.002)	(0.0007)	N:(0.0004)	O:(0.007)	.	38 mm	Ø x 19 mm last	<b>17025, 17034</b>
	C50.03	.	0.094	0.027	.	.	.	.	.	.	.	50 mm	Ø x 10-12 mm	
	IARM Cu903-18	0.0059	(0.0010)	.	(0.0020)	.	0.0019	.	O:0.0013	.	.	31 mm	Ø x 2 or 18 mm	
	BS 903B	.	0.003	.	(0.0004)	.	.	.	.	.	.	38 mm	Ø x ~7 mm last	
	BS 938-1	0.0048	(0.004)	.	.	.	.	.	.	.	.	38 mm	Ø x 12 mm	
	<b>BS 936</b>	O:0.0026	0.0045	N:(0.0001)	(0.0025)	.	(0.003)	(0.00004)	.	.	Ti:(0.00006)	50 mm	Ø x 19+ mm	<b>17025</b>
	32X LB10-22	0.0136	0.0050	0.016	.	.	0.0004	(0.0003)	.	.	.	50 mm	Ø x 20 mm	
	IARM Cu932-18	0.019	0.0073	0.094	(0.0025)	0.0007	(0.0024)	.	.	(0.009)	.	38 mm	Ø x ~3 or 19 mm	19mm is last
	IARM 91E	0.015	0.008	0.109	(0.003)	0.0011	0.0024	(0.0008)	.	0.004	.	31 mm	Ø x 2 mm	
	<b>BS 932G</b>	.	0.0096	.	(0.011)	.	0.0025	(0.001)	.	O:0.0014	.	38 mm	Ø x ~7 or 19+ mm	<b>17025, 17034</b>
	<b>BS 932H</b>	.	0.010	.	(0.007)	.	0.0028	.	O:0.0016	.	.	38 mm	Ø x ~7 or 19+ mm	<b>17025, 17034</b>
	IARM 184A	(0.01)	0.010	(0.03)	(0.004)	.	(0.001)	(0.001)	.	.	.	31 mm	Ø x 2 mm	
	32X LB13D	0.0249	0.118	0.058	.	0.0006	0.0044	.	.	.	.	~40 mm	Ø x ~15 mm	
	BAM 377	0.00644	(<0.0010)	0.00422	.	.	.	0.00669	.	0.0055	.	40 mm	Ø x 30 mm	
	BS 922B-1	(0.001)	0.001	.	.	.	.	.	.	.	.	41 mm	Ø x 12 mm	
	BS 922B-2	(0.001)	0.001	.	.	.	.	.	.	.	.	41 mm	Ø x 12 mm	
	BS 922B-4	(0.001)	0.001	.	.	.	.	.	.	.	.	41 mm	Ø x 12 mm	
	BS 922B-5	(0.001)	0.001	.	.	.	.	.	.	.	.	41 mm	Ø x 12 mm	
	BAM 378	0.00266	0.00995	(<0.0001)	.	0.01007	0.0089	0.0311	0.00287	(<0.0002)	0.00850	40 mm	Ø x 30 mm	
	32X LB14H	0.046	0.055	0.496	.	0.0005	0.0018	.	.	.	.	~40 mm	Ø x ~15 mm	
	IARM 267A	(0.002)	(0.004)	(0.005)	(0.003)	.	(0.002)	(0.001)	.	(0.002)	.	31 mm	Ø x 2 or 18 mm	
	<b>BS 836D</b>	0.023	0.0081	0.093	(0.003)	.	0.0027	O:0.0012	(0.0004)	Be:(0.00009)	.	44 mm	Ø x ~7 or 19+ mm	<b>17025, 17034</b>
	<b>BS 836B</b>	0.025	0.0081	0.10	(0.0032)	.	0.0027	O:0.0010	(0.0005)	Be:(0.00009)	.	44 mm	Ø x ~7 or 19+ mm	<b>17025, 17034</b>
	<b>BS 836C</b>	0.024	0.0082	0.10	(0.003)	.	0.0027	O:0.0014	(0.0007)	Be:(0.000005)	.	44 mm	Ø x ~7 or 19+ mm	<b>17025, 17034</b>
	32X LB15F	0.023	0.0163	0.129	.	0.0006	0.0004	.	.	.	.	~40 mm	Ø x ~15 mm	
	HRT CU2022	.	0.0058	0.0035	.	(0.0006)	.	.	.	0.0035	.	47 mm	Ø x 20 mm	
	BAM M397	.	(0.00029)	.	.	.	.	.	.	<0.0001	<0.0001	40 mm	Ø x 30 mm	
	BAM M397a	.	(0.00029)	.	.	.	.	.	.	<0.0001	<0.0001	40 mm	Ø x 30 mm	
	IARM 72B	.	(0.003)	.	0.002	.	.	.	.	.	.	31 mm	Ø x 2 mm	
	IARM Cu314-21	0.0011	0.0005	(0.001)	(0.002)	0.0004	.	Ti:0.0010	O:(0.0010)	(0.0013)	.	38 mm	Ø x 3 or 19 mm	

Number	Ag	As	Bi	C	Cd	Co	Cr	Mg	Se	Te	Units
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**CRM LEADED, TIN, AND LEADED TIN BRONZE DISC AND ROD SETS**

available individually except IMN WL4 and WL5 are SET ONLY IMN BB: 10 mm Ø x 100 mm IMN BL: 40 mm Ø x 27 mm IMN BI, WL: 40 mm Ø x 25 mm

Number	Al	As	Bi	C	Cd	Co	Cu	Fe	Mg	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn
IMN BL1	0.11	0.058	0.024	.	0.060	.	Rem	0.38	0.051	0.062	0.25	0.49	0.25	(0.0081)	0.053	0.059	2.58	0.68
IMN BL2	0.15	0.039	0.014	.	0.040	.	Rem	0.21	0.11	0.055	0.37	0.29	0.14	(0.0063)	0.039	0.031	4.04	0.40
IMN BL3	0.019	0.025	0.0099	.	0.022	.	Rem	0.10	.	0.026	0.13	0.084	0.065	.	0.021	0.015	6.12	0.15
IMN BL4	.	0.0089	0.0058	.	0.0092	.	Rem	0.014	.	0.0092	0.015	0.010	0.013	(0.022)	0.0095	0.011	8.38	0.017
IMN BL5	0.00052	0.00057	0.0015	.	0.0015	.	Rem	0.0061	0.0030	0.0011	0.0074	0.0042	0.0069	0.031	0.0039	(0.0038)	11.05	0.0078
IMN BB1	0.019	0.086	0.032	.	.	.	84.82	0.33	.	0.081	0.061	0.055	1.55	.	0.60	0.037	8.10	3.90
IMN BB2	0.032	0.12	0.024	.	.	.	84.09	0.28	.12	0.12	0.097	0.085	2.64	.	0.49	0.055	7.11	4.70
IMN BB3	0.0021	0.0079	0.0021	.	.	.	80.88	0.037	.	0.0012	2.42	(0.014)	6.73	.	0.052	0.0044	3.36	6.23
IMN BB4	0.0062	0.029	0.011	.	.	.	81.32	0.086	.	0.020	1.20	(0.030)	6.14	.	0.21	0.018	2.58	8.11
IMN BB5	0.015	0.051	0.018	.	.	.	82.25	0.14	.	0.054	0.49	0.037	5.18	.	0.31	0.028	4.11	7.21
IMN BB6	0.040	0.16	0.041	.	.	.	83.54	0.31	.	0.15	0.23	0.12	3.52	.	0.62	0.083	5.47	5.40
<b>IMN BI1</b>	0.181	0.138	0.120	.	<b>17034</b>	.	Rem	0.418	.	0.263	2.411	0.698	(6.97)	(0.025)	0.578	0.233	3.19	3.55
<b>IMN BI2</b>	(0.077)	(0.11)	0.0699	.	<b>17034</b>	.	Rem	0.308	.	0.146	1.457	0.585	(5.48)	(0.011)	0.432	0.129	4.18	5.73
<b>IMN BI3</b>	0.0344	0.0521	0.0284	.	<b>17034</b>	.	Rem	0.1669	.	0.0821	0.290	0.321	4.522	(0.0039)	0.235	0.0756	5.011	7.23
<b>IMN BI4</b>	(0.0021)	(0.0100)	0.00296	.	<b>17034</b>	.	Rem	0.0828	.	0.0249	0.0834	0.0288	3.82	(0.0029)	0.0753	(0.0097)	7.69	10.22
IMN WL1	0.082	0.0010	0.0093	0.0050	0.0017	0.0010	95.54	0.072	0.00036	0.0041	0.44	0.012	0.013	0.020	.	0.057	0.22	3.52
IMN WL2	0.057	0.0078	0.0073	0.0082	0.0023	0.0065	97.49	0.13	0.00097	0.0038	0.32	0.016	0.011	0.0070	0.0050	0.046	0.32	1.56
IMN WL3	0.0034	0.020	0.0050	0.010	0.010	0.0096	96.51	0.20	0.0016	0.38	0.22	0.021	0.0083	0.0088	0.0085	0.0037	0.37	2.21
IMN WL4	.	0.0034	0.0026	0.0032	0.0068	0.013	96.41	0.012	.	.	0.019	.	0.0066	0.0050	.	0.0019	0.55	2.97
IMN WL5	0.0014	0.0011	0.0011	.	0.0038	0.019	97.62	0.0025	.	0.00073	0.0014	.	0.0030	0.0019	0.0006	0.0009	0.73	1.61
IMN WL6	0.10	0.024	0.012	0.016	0.025	0.019	95.76	0.31	0.015	0.14	0.091	0.032	0.016	0.017	0.011	0.13	0.80	2.48

**COPPER ALLOY XRF SET**

Part Number: BS CU-22 AVAILABLE INDIVIDUALLY ~7 mm thick discs (BS 938-1 ~12mm) **17025**

CDA Number	Cu	Al	Fe	Mn	Ni	Pb	Si	Sn	Zn	As	C	P	S	Sb	Be	Co
110	<b>BS 110C</b> 99.97	(0.0009)	(0.002)	(0.0004)	(0.0005)	(0.0003)	(0.0009)	(0.0002)	(0.004)	(0.0001)	(0.002)	0.0016	0.0008	(0.0003)	.	(0.001)
145	<b>BS 14500</b> 99.4	(<0.0006)	0.0041	0.00004	.	0.0008	(<0.002)	0.0002	0.004	(<0.0005)	0.0005	0.0075	0.0033	(<0.001)	(<1ppm)	(0.001)
172	BS 172Be-1 97.68	(0.02)	0.052	0.0010	0.039	(0.002)	0.055	0.033	0.0070	(0.001)	(0.001)	0.003	(<0.0002)	.	1.89	0.206
360	BS 360A 61.42	<0.001	0.151	0.0007	0.058	2.51	<0.005	0.13	35.63	0.002	(0.0032)	0.001	(0.0003)	0.008	.	.
464	BS 464A 60.6	(0.001)	0.013	0.0002	0.004	0.056	<0.01	0.62	38.73	<0.002	(0.0006)	0.012	0.001	(0.001)	.	.
482	BS 482A 60.0	(0.003)	0.020	<0.002	(0.007)	0.50	(0.002)	0.65	38.8	<0.002	(0.0015)	<0.003	<0.002	0.0012	.	.
510	BS 510A 96.10	<0.002	0.005	<0.002	0.020	0.016	<0.003	4.6	0.21	0.0008	(0.0006)	0.11	0.008	(0.003)	.	.
544	BS 544A 88.4	(0.0005)	0.092	<0.002	0.16	4.16	<0.002	4.42	3.42	0.011	0.003	0.021	0.038	0.040	.	.
623	BS 623A 88.13	9.12	2.19	0.273	0.146	0.001	0.014	0.002	0.008	(0.006)	(0.002)	<0.002	<0.0005	<0.002	.	.
630	<b>BS 630B</b> 80.8	9.78	3.90	0.281	4.88	0.0056	0.0166	0.0289	0.254	0.0007	0.0067	0.0028	0.0013	(0.0005)	.	0.0017
642	BS 642A 91.0	6.70	0.17	0.005	0.025	0.001	1.80	0.018	0.011	<0.002	0.001	0.001	<0.001	(0.002)	.	.
655	BS 655A 95.74	(0.002)	0.075	0.91	0.008	0.008	3.14	0.07	0.02	<0.002	(0.0006)	(0.004)	(0.0003)	<0.002	.	.
675	<b>BS 675B</b> 58.7	(<0.005)	1.10	0.175	0.0071	0.071	(<0.005)	0.92	39.3	0.0009	(<0.001)	0.0020	0.0002	0.0011	.	(0.0002)
706	BS 706B 87.00	<0.003	1.56	0.61	10.9	0.006	<0.002	0.006	0.054	<0.0005	(0.004)	0.009	0.009	<0.002	.	0.005
715	BS 715A 69.0	(0.01)	0.61	0.82	30.22	(0.007)	0.10	0.008	0.10	(0.0014)	0.03	0.006	0.001	(0.003)	.	.
863	<b>BS 863B</b> [62.4]	5.25	2.84	2.97	0.081	0.0205	0.0103	0.033	26.1	0.0004	0.0028	0.0010	0.0007	0.0012	.	0.0009
903	BS 903B 86.7	(0.001)	0.049	0.0004	0.50	0.10	0.002	7.9	4.39	0.003	(0.0004)	0.073	0.006	0.003	.	.
922	BS 922B-1 88.4	(0.001)	0.010	(0.002)	0.61	1.33	(0.001)	5.8	.	0.001	.	0.037	.	0.002	.	Ag: (0.001)
929	<b>BS 929</b> 85.3	(<0.00005)	0.0030	.	3.37	1.98	(<0.001)	9.07	0.0055	0.0017	(<0.005)	0.119	0.0026	0.0146	.	0.0031
938	BS 938-1 77.1	(<0.002)	0.015	(0.001)	0.49	14.8	(<0.004)	7.16	0.26	(0.004)	.	0.059	0.009	0.033	.	Ag: 0.0048
954	BS 954C 83.9	10.21	3.9	0.29	1.38	0.050	0.07	0.08	0.09	(0.006)	(0.004)	0.011	(<0.0005)	<0.003	.	.
955	BS 955C 80.6	10.68	4.04	0.06	4.31	0.003	0.025	0.003	0.15	(<0.002)	.	0.012	.	(<0.002)	.	Ag: 0.014

ALLOY	ISO?	NUMBER	ALLOY	ISO?	NUMBER	ALLOY	ISO?	NUMBER
101		IARM Cu101-18	630		IARM 80D	922		BS 922B-4
110	17034	BS 110C	630	17034	MP 3.00243	922		BS 922B-5
110		IARM Cu110-18	632		CTIF CA26	927.1		32X SN1
110	17034	MP 3.00262	642	17025	BS 642B	929	17025	BS 929
122.2		CURM 09.03	642	17025	BS 642C	929 MOD	17034	BS 929MOD
125		CURM 09.02	642	17034	BS 642D	931 MOD		C71.34
145	17025	BS 14500	642		IARM 81B	932	17034	BS 932G
145	17034	BS 14500A	642		IARM Cu648-18	932	17034	BS 932H
172		BS 172Be-1	647		IARM Cu647-18	932		IARM 91E
172	17034	BS 172Be-2	655		37X 65500	932		IARM Cu932-18
172		CTIF 4872	655		BS 655A	932 MOD		CTIF B23
172		IARM Cu172-18	655	17025	BS 655B	936	17025	BS 936
172		IARM Cu172-19	655	17025	BS 655C	936		CTIF B31
173		36X CBC4	655		IARM 82B	937		32X 93700
175.1		36x CBC5	655		IARM Cu655-18	937	17025	BS 937C
175.1	17034	BS 17510	656.8		HRT Cu2021	937		CURM 50.02
180		36X 274	675		BS 675	937		IARM 92C
181.50	17025	BS 18150	675		BS 675A	938		BS 938-1
181.50	17025	BS 18150A	675	17025	BS 675B	941		IARM 184A
181.55		36X CCR1	675		BS 675C	945 MOD		CTIF B32
182		IARM Cu182-18	675		IARM 83B	947		IARM 267A
182		IARM Cu182-21	687		BAM 368	952.2		CTIF 2152-S
240		C30.07	693		ERM-EB393A	953		CTIF CA3
260		C48.06	702.6		37X 218	954		BS 954B
260		CURM 48.04	706		36X 70600A	954		BS 954C
261.3		C48.03	706		BS 706	954		BS CC954
274		C38.06	706		BS 706A	954		IARM Cu954-18
274		C38.06-1	706		BS 706B	954		IARM Cu954-19
280		C30.03	706	17034	BS 706C	954		IARM Cu954-21
280		C30.12	706		CTIF CuNi 10	955		BS 955C
314		IARM 72B	706		IARM 84C	955		IARM Cu955-18
314		IARM Cu314-21	706		HRT Cu2014	955 MOD		CTIF CA10
360	17034	BS 360C	713		BAM 389	955.1		IARM 334A
360	17034	BS 360D	715		36X 71500	955.1		IARM 334B
360		IARM Cu360-18	715		BS 715A	955.1 MOD		CTIF CA22
360		SRM 1124	715	17034	BS 715B	956		32X CA12
370		31X B18	715	17034	BS 715C	976		IARM 298A
371		C30.22	715		IARM Cu715-18	Coinage Alloy		36X CN21
464		BS 464A	715		IARM Cu715-20	Coinage Alloy		36X CN23
464	17034	BS 464B	715		SRM 1276a	Cu IX		SRM C1252a
464		IARM Cu464-21	767		C65.28	Cu VIII		SRM C1251a
464	17034	MP 3.00263	798.3		34X 79830	Cu X		SRM C1253a
482		BS 482A	836	17034	BS 836B	CuSn5Zn5Pb2		HRT CU2022
482		IARM 75B	836	17034	BS 836C	Envirobrass 2-1		IARM 226A
482		IARM 75C	836	17034	BS 836D	Envirobrass 2-2		IARM 227A
485	17034	BS 485A	836		IARM Cu836-18	Envirobrass 2-3		IARM 228A
485		IARM 76D	836 + Al		IMN BR1	Federalloy I-836		IARM 265A
485		IARM Cu485-18	838		33X GM8	Federalloy I-844		IARM 264A
486		IARM Cu486-18	844		IARM Cu844-18	Federalloy I-848A		IARM 263A
510		32X 51000	855		C38.01	Federalloy III-932		IARM 266A
510		BS 510A	855		C38.02	Hiduron 130		IARM CuH130-18
510	17025	BS 510B	855		C38.03	Hiduron 191		IARM CuH191-18
510	17034	BS 510C	855		C38.04	NARloy-A		IARM 159A
510		IARM 77B	855		C38.05	NARloy-Z		IARM 160A
510		IARM Cu510-18	857		BS 857B-1	Spinodal Alloy		36X SP1
512		32X 92100	857		BS 857B-2	Spinodal Alloy		36X SP2
521		32X 52100	857		BS 857B-3			
521		HRT CU2016	857		BS 857B-4			
524		C11.04	862		CTIF LH7			
544		33X 54400	863	17025	BS 863B			
544	17025	BS 544B	863		IARM 88C			
544	17034	BS 544C	873		31X WSB6			
544		IARM 78B	893.2, Magnolia B		IARM CuMB1-18			
544		IARM Cu544-18	902		BAM 377			
544 MOD	17025	BS 544c	903		BS 903B			
610 MOD		31X B17	903	17034	BS 903E			
614		32X 61400	903		IARM Cu903-18			
623		BS 623	905		BS 905A-1			
623		BS 623A	905		BS 905A-2			
623		IARM 79B	905		BS 905A-3			
623		IARM 79C	905		BS 905A-4			
624		32X ALB3	907		IARM 310A			
624	17034	BS 624	908		32X PB10			
624		C52.51	910 MOD		CTIF B1			
624		CTIF 3011-G	922		BS 922B-1			
624		CTIF CA21	922		BS 922B-2			
630	17025	BS 630B						
630	17025	BS 630C						

Please use the Adobe Acrobat "search" function to find the complete chemistry of these samples listed within this catalog

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
101	Impurity limits	>99.99	<0.0025	.	<0.0010	<0.0005	<0.0010	<0.0003	<0.0005	<0.0018	<0.0004	.	<0.0002	<0.0001	<0.0005	.	<0.0001	.	.	.	.	.
102	Cu = Ag-Cu, O<0.0010	>99.95	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
103	Cu = Ag-Cu, O<0.0010	>99.95	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
104	Cu = Ag-Cu, O<0.0010	>0.027	>0.034	.	.	.	.	0.001-0.005	.	.	.	.	.	.	.	.	.	.	.	.	.	.
105	Cu = Ag-Cu, O<0.0010	>99.95	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
107	Cu = Ag-Cu, O<0.0010	>99.95	>0.085	.	.	.	.	0.005-0.012	.	.	.	.	.	.	.	.	.	.	.	.	.	.
108	Cu = Ag-Cu+P	>99.95	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
109.1	Cu = Ag-Cu, O<0.005	>99.95	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
109.2	Cu = Ag-Cu, O<0.02	>99.90	>0.044	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
109.3	Cu = Ag-Cu, O<0.02	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
109.4	Cu = Ag-Cu, O<0.02	>99.90	>0.085	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
110	Cu = Ag-Cu	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
110.1	Cu = Ag-Cu	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
110.2	Cu = Ag-Cu	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
110.3	Cu = Ag-Cu	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
110.4	Impurity limits, O 0.010-0.065	>99.90	<0.0025	.	<0.0010	.	<0.0010	<0.0005	<0.0005	<0.0015	<0.0004	.	<0.0005	<0.0005	<0.0005	<0.00010	.	.	.	.	.	
111	Cu = Ag-Cu	>99.90	>0.027	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
113	Cu = Ag-Cu	>99.90	>0.034	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
114	Cu = Ag-Cu	>99.90	>0.034	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
115	Cu = Ag-Cu	>99.90	>0.054	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
116	Cu = Ag-Cu	>99.90	>0.085	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
117	Cu = Cu+Bi, B 0.004-0.020	>99.90	.	.	.	.	.	<0.04	.	.	.	.	.	.	.	.	.	.	.	.	.	.
119.04	Cu = Ag-Cu	>0.027	>0.014	.	.	.	.	0.004-0.012	<0.004	.	.	.	.	.	.	.	.	.	.	.	.	.
119.05	Cu = Ag-Cu	>99.90	>0.034	.	.	.	.	0.005-0.012	<0.020	.	.	.	.	.	.	.	.	.	.	.	.	.
119.06	Cu = Ag-Cu	>99.90	>0.054	.	.	.	.	0.015-0.040	<0.003	.	.	.	.	.	.	.	.	.	.	.	.	.
119.07	Cu = Ag-Cu	>99.90	.	.	.	.	.	0.015-0.025	<0.003	.	.	.	.	.	.	.	.	.	.	.	.	.
122.2	Cu = Ag-Cu	>99.90	.	<0.01	.	.	.	0.040-0.065	<0.004	.	.	.	.	.	.	.	.	.	.	.	.	.
123	Cu = Ag-Cu	>99.90	.	.	.	.	.	0.015-0.040	<0.004	.	.	.	.	.	.	.	.	.	.	.	.	.
125	Cu=Ag-Cu, TeSe <0.025	>99.88	.	.	<0.05	.	<0.050	>0.03	<0.004	.	.	.	.	.	<0.012	.	<0.003	.	.	.	.	.
125.1	Cu=Ag-Cu, TeSe <0.025	>99.90	.	.	<0.05	.	<0.050	>0.03	<0.020	.	.	.	.	<0.080	<0.012	.	<0.005	.	.	.	.	.
127	Cu=Ag-Cu, TeSe <0.025	>99.98	>0.027	.	.	.	<0.050	.	<0.004	.	.	.	.	.	.	.	<0.003	.	.	.	.	.
Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
128	Cu=Ag-Cu, TeSe <0.025	>99.88	>0.034	.	.	.	<0.050	.	<0.004	.	.	.	.	.	.	.	<0.003	.	.	.	.	.
129	Cu=Ag-Cu, TeSe <0.025	>99.88	>0.054	.	.	.	<0.050	.	<0.004	.	.	.	.	.	.	.	<0.003	.	.	.	.	.
130	Cu=Ag-Cu, TeSe <0.025	>99.88	>0.085	.	.	.	<0.050	.	<0.004	.	.	.	.	.	.	.	<0.003	.	.	.	.	.
131	Cu = Ag-Cu	>99.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
141	Cu = Ag-Cu	>99.40	.	.	.	.	.	.	.	.	.	.	.	.	0.15-0.50	.	.	.	.	.	.	.
141.8	Cu = Ag-Cu	>99.90	.	<0.01	.	.	.	<0.075	<0.02	.	.	.	.	<0.002	.	.	.	.	.	.	.	.
141.81	Cu=Ag-Cu, C<0.005, C6<0.002	>99.90	.	.	.	.	.	<0.002	<0.002	.	.	.	.	<0.002	.	.	.	.	.	.	.	.
142	Cu = Ag-Cu	>99.90	.	.	.	.	.	0.015-0.040	.	.	.	.	.	.	0.15-0.50	.	.	.	.	.	.	.
142.1	Cu = Ag-Cu	>99.20	.	.	.	.	.	0.013-0.050	.	.	.	.	.	.	0.30-0.50	.	.	.	.	.	.	.
143	Cu = Ag-Cu+Cd, Cd 0.05-0.15	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
143.1	Cu = Ag-Cu+Cd, Cd 0.10-0.30	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
144	Cu=Ag-Cu+Sn+P, Te+Se <0.02	>99.90	.	.	<0.03	.	<0.05	0.013-0.025	.	0.20-0.50	<0.003	.	0.10-0.20	<0.05	.	.	.	.	.	.	.	.
144.1	Cu = Ag-Cu+Sn	>99.90	.	.	<0.05	.	<0.05	0.005-0.020	<0.05	0.20-0.50	.	0.10-0.20	<0.05	.	.	.	.	.	.	.	.	.
144.15	Cu = Ag-Cu+Sn	>99.96	.	.	.	.	.	.	.	0.05-0.15	.	0.10-0.15	.	.	.	.	.	.	.	.	.	.
144.2	Cu=Ag-Cu+Sn+Te Te+Se 0.02-0.05	>99.90	.	.	.	.	.	.	.	0.05-0.15	.	0.05-0.15	.	.	.	.	.	.	.	.	.	.
144.3	Cu = Ag-Cu	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
144.4	Cu = Ag-Cu+Sn	>99.96	.	.	.	.	.	.	.	.	.	.	0.25-0.35	.	.	.	.	.	.	.	.	.
145	Cu = Ag-Cu+Te, Te 0.40-0.70	>99.90	.	.	.	.	.	0.004-0.012	.	.	.	.	0.005-0.010	.	.	.	.	.	.	.	.	.
145.1	Cu = Ag-Cu+Te, Te 0.30-0.70	>99.85	.	.	.	.	.	0.010-0.030	<0.05	.	.	.	.	.	.	.	.	.	.	.	.	.
145.2	Cu = Ag-Cu+Te, Te 0.40-0.70	>99.40	.	.	.	.	.	0.004-0.020	.	.	.	.	.	.	.	.	.	.	.	.	.	.
145.3	Cu = Ag-Cu, Te 0.003-0.022	>99.95	.	.	.	.	.	.	.	0.20-0.50	.	.	0.003-0.22	.	.	.	.	.	.	.	.	.
147	Cu = Ag-Cu+PbS	>99.90	.	.	.	.	.	0.002-0.005	.	0.05-0.15	.	.	.	.	.	.	.	.	.	.	.	.
147.1	Cu = Ag-Cu+PbS	>99.90	.	.	.	.	.	0.010-0.030	<0.05	0.05-0.15	.	.	.	.	.	.	.	.	.	.	.	.
147.2	Cu = Ag-Cu+PbS	>99.50	.	.	.	.	.	0.10-0.03	<0.10	0.20-0.50	.	.	.	.	.	.	.	.	.	.	.	.
147.3	Cu = Ag-Cu	>99.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
150	Cu = Ag-Cu	>99.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
151	Cu = Ag-Cu	>99.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
151.5	Cu = Ag-Cu+Zn	>99.96	0.027-0.10	.	.	.	.	0.040-0.080	.	.	.	.	.	.	.	.	.	.	.	.	.	.
155	Cu = Ag-Cu	>99.75	.	.	.	.	.	0.006-0.09	.	.	.	.	.	.	.	.	.	.	.	.	.	.
156	Cu = Ag-Cu	>99.60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.20-0.30	.	.	.	.
157.1	Cu = Ag-Cu, O 0.07-0.15	>99.71	.	0.08-0.12	<0.01	.	.	.	<0.01	.	.	.	.	.	.	.	.	.	.	.	.	.
157.15	Cu = Ag-Cu, O 0.12-0.19	>95.62	.	0.13-0.17	<0.01	.	.	.	<0.01	.	.	.	.	.	.	.	.	.	.	.	.	.
157.15	Cu=Ag-Cu, B 1.2-1.8, O <0.19	>97.82	.	0.13-0.17	<0.01	.	.	.	<0.01	.	.	.	.	.	.	.	.	.	.	.	.	.
157.2	Cu = Ag-Cu, O 0.16-0.24	>95.52	.	0.18-0.22	<0.01	.	.	.	<0.01	.	.	.	.	.	.	.	.	.	.	.	.	.
157.25	Cu = Ag-Cu, O 0.20-0.28	>93.43	.	0.23-0.27	<0.01	.	.	.	<0.01	.	.	.	.	.	.	.	.	.	.	.	.	.
Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
157.35	Cu = Ag+Cu, O 0.29-0.37	>99.24		0.33-0.37	<0.01				<0.01													
157.6	Cu = Ag+Cu, O 0.52-0.59	>98.77		0.58-0.62	<0.01				<0.01													
162	Cu = Ag+Cu, Cd 0.70-1.20	rem			<0.02																	
162.1	Cu = Ag+Cu, Cd 0.50-1.20	rem			<0.02																	
164	Cu = Tot. All., Cd 0.60-0.90	>99.80											0.20-0.40									
165	Cu = Ag+Cu, Cd 0.60-1.00	rem			<0.02								0.50-0.70									
170	Cu = Ag+Cu, Ni+Co >0.20	rem		<0.20	<0.20							<0.20										
172	Cu = Ag+Cu, Ni+Co >0.20	rem		<0.20	<0.20							<0.20										
174	Cu = Ag+Cu, Ni+Co >0.20	rem		<0.20	<0.20				0.20-0.60			<0.20						0.15-0.50				
174.1	Cu = Ag+Cu	rem		<0.20	<0.20							<0.20										
174.2	Cu = Ag+Cu	rem		<0.20	<0.20							<0.20										
174.5	Cu = Ag+Cu	rem		<0.20	<0.20		0.50-1.00					<0.20										<0.50
174.55	Cu = Ag+Cu	rem		<0.20	<0.20		0.50-1.00					<0.20										<0.50
174.6	Cu = Ag+Cu	rem		<0.20	<0.20		1.0-1.4					<0.20										<0.50
174.65	Cu = Ag+Cu	rem		<0.20	<0.20							<0.20										<0.50
175	Cu = Ag+Cu	rem		<0.20	<0.10							<0.20										
175.1	Cu = Ag+Cu	rem		<0.20	<0.10		1.4-2.2					<0.20										
175.2	Cu = Ag+Cu	rem		<0.20	<0.10		0.50-1.50					<0.20										
175.3	Cu = Ag+Cu	rem		<0.6	<0.20		1.8-2.5					<0.20										
175.3	Cu = Ag+Cu, Ni = Ni+Co	rem		<0.6	<0.20							<0.20										
176	Cu = Ag+Cu	rem	0.90-1.10	<0.20	<0.10							<0.20										
177	Cu = Ag+Cu, Te 0.40-0.60	rem		<0.20	<0.10							<0.20										
180	Cu = Ag+Cu, Ni = Ni+Co	rem		<0.20	<0.15							0.40-0.80										
180.3	Cu = Ag+Cu	>99.90					2.0-3.0	0.005-0.150				0.08-0.12										
180.4	Cu = Ag+Cu	>99.90										0.20-0.30										
180.45	Cu = Ag+Cu	>99.10										<0.05										
180.5	Cu = Ag+Cu, Te 0.005-0.015	>99.80										0.02-0.07										
180.7	Cu = Ag+Cu	>99.00										0.01-0.10										0.01-0.40
180.8	Cu = Ag+Cu	rem	0.01-0.30		0.02-0.20							0.01-0.10										0.01-0.15
180.9	Cu = Ag+Cu	>96.00					0.30-1.20					0.50-1.20										0.15-0.80
181	Cu = Ag+Cu	>98.70																				0.08-0.20
181.35	Cu = Ag+Cu, Cd 0.20-0.60	rem																				
181.4	Cu = Ag+Cu	rem																				
181.45	Cu = Ag+Cu	rem																				
181.5	Cu = Ag+Cu	rem										0.005-0.05										
181.5	Cu = Ag+Cu	rem										0.005-0.05										
186	Cu = Ag+Cu	rem		<0.01	0.25-0.80							<0.10										
186.1	Cu = Ag+Cu	rem			<0.10							<0.10										
186.65	Cu = Ag+Cu	>99.00			<0.15							<0.10										
185	Cu = Ag+Cu, Ca<0.005, Li<0.05	rem	0.08-0.12						<0.05			<0.10										
185.5	Cu = Ag+Cu	rem							<0.015			<0.10										
186	Cu = Ag+Cu	rem			0.25-0.80																	
186.1	Cu = Ag+Cu	rem			<0.10							<0.10										
186.65	Cu = Ag+Cu	>99.00			<0.15							<0.10										
185	Cu = Ag+Cu, Ca<0.005, Li<0.05	rem	0.08-0.12						<0.015			<0.10										
185.5	Cu = Ag+Cu	rem							<0.015			<0.10										
186	Cu = Ag+Cu	rem			0.25-0.80																	
186.1	Cu = Ag+Cu	rem			<0.10							<0.10										
186.65	Cu = Ag+Cu	>99.00			<0.15							<0.10										
185	Cu = Ag+Cu, Ca<0.005, Li<0.05	rem	0.08-0.12						<0.015			<0.10										
185.5	Cu = Ag+Cu	rem							<0.015			<0.10										
186	Cu = Ag+Cu	rem			0.25-0.80																	
186.1	Cu = Ag+Cu	rem			<0.10							<0.10										
186.65	Cu = Ag+Cu	>99.00			<0.15							<0.10										
185	Cu = Ag+Cu, Ca<0.005, Li<0.05	rem	0.08-0.12						<0.015			<0.10										
185.5	Cu = Ag+Cu	rem							<0.015			<0.10										
186	Cu = Ag+Cu	rem			0.25-0.80																	
186.1	Cu = Ag+Cu	rem			<0.10							<0.10										
186.65	Cu = Ag+Cu	>99.00			<0.15							<0.10										
185	Cu = Ag+Cu, Ca<0.005, Li<0.05	rem	0.08-0.12						<0.015			<0.10										
185.5	Cu = Ag+Cu	rem							<0.015			<0.10										
186	Cu = Ag+Cu	rem			0.25-0.80																	
186.1	Cu = Ag+Cu	rem			<0.10							<0.10										
186.65	Cu = Ag+Cu	>99.00			<0.15							<0.10										
185	Cu = Ag+Cu, Ca<0.005, Li<0.05	rem	0.08-0.12						<0.015			<0.10										
185.5	Cu = Ag+Cu	rem							<0.015			<0.10										
186	Cu = Ag+Cu	rem			0.25-0.80																	
186.1	Cu = Ag+Cu	rem			<0.10							<0.10										
186.65	Cu = Ag+Cu	>99.00			<0.15							<0.10										
185	Cu = Ag+Cu, Ca<0.005, Li<0.05	rem	0.08-0.12						<0.015			<0.10										
185.5	Cu = Ag+Cu	rem							<0.015			<0.10										
186	Cu = Ag+Cu	rem			0.25-0.80																	
186.1	Cu = Ag+Cu	rem			<0.10							<0.10										
186.65	Cu = Ag+Cu	>99.00			<0.15							<0.10										
185	Cu = Ag+Cu, Ca<0.005, Li<0.05	rem	0.08-0.12						<0.015			<0.10										
185.5	Cu = Ag+Cu	rem							<0.015			<0.10										
186	Cu = Ag+Cu	rem																				

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr	
197		rem			0.30-1.20	<0.05	<0.05	0.10-0.40	<0.05				<0.02	<0.20				<0.05					
197.1	Ni+Co <0.10				0.05-0.40	<0.05	<0.10	0.07-0.15	<0.05				<0.20	<0.20									0.01-0.20
197.2	Ni+Co <0.10				0.05-0.50	<0.05	<0.10	0.05-0.15	<0.05				<0.20	<0.20									0.03-0.06
197.5					0.35-1.20	<0.05	<0.05	0.10-0.40	<0.05				0.05-0.40	<0.20				<0.05					0.06-0.20
198					0.02-0.50			0.01-0.10					0.10-1.00	0.30-1.50									0.01-0.20
198.1					1.5-3.0			<0.10						1.0-5.0					<0.10			<0.10	<0.10
199		>99.50																					2.9-3.4
205		97.0-98.0			<0.05			<0.02						rem									
210		94.0-96.0			<0.05			<0.03						rem									
220		89.0-91.0			<0.05			<0.05						rem									
226		86.0-89.0			<0.05			<0.05						rem									
230		84.0-86.0			<0.05			<0.05						rem									
230.3		83.5-85.5			<0.05			<0.05				0.20-0.40		rem									
234		81.0-84.0			<0.05			<0.05						rem									
240		78.5-81.5			<0.05			<0.05						rem									
240.8		78.0-82.0		<0.10				<0.20						rem									
250		74.0-76.0			<0.05			<0.05						rem									
256		71.0-73.0			<0.05			<0.05						rem									
260		68.5-71.5			<0.05			<0.07						rem									
261		68.5-71.5			<0.05			0.02-0.05						rem									
261.3		68.5-71.5			<0.05			<0.05						rem	0.02-0.08								
262		67.0-70.0			<0.05			<0.07						rem									
263.8		66.0-72.0			<0.05			<0.30						rem									
268		64.0-68.5			<0.05			<0.15						rem									
270		63.0-68.5			<0.07			<0.10						rem									
272		62.0-65.0			<0.07			<0.07						rem									
274		61.0-64.0			<0.05			<0.10						rem									
280		59.0-63.0			<0.07			<0.30						rem									
282		58.0-61.0		<0.005	<0.05			0.12-0.22					<0.05	rem									
285.8		49.0-52.0		<0.10	<0.10			<0.30						rem									
298		49.0-52.0		<0.10	<0.10			<0.50						rem									
310		89.0-91.0			<0.10			0.30-0.70						rem									
312		87.5-90.5			<0.10		<0.25	0.7-1.2						rem									
314		87.5-90.5			<0.10		<0.7	1.3-2.5						rem									
316		87.5-90.5			<0.10		0.7-1.2	1.3-2.5						rem									
<b>Alloy</b>	<b>Notes</b>	<b>Cu</b>	<b>Ag</b>	<b>Al</b>	<b>Fe</b>	<b>Mn</b>	<b>Ni</b>	<b>P</b>	<b>Pb</b>	<b>S</b>	<b>Sb</b>	<b>Si</b>	<b>Sn</b>	<b>Zn</b>	<b>As</b>	<b>Be</b>	<b>Bi</b>	<b>Co</b>	<b>Cr</b>	<b>Mg</b>	<b>Ti</b>	<b>Zr</b>	
320		83.5-86.5			<0.10		<0.25		1.5-2.2					rem									
325		72.0-74.5			<0.10				2.5-3.0					rem									
325.1		69.0-72.0			<0.07				0.30-0.70					rem									
330		65.0-68.0			<0.06				0.25-0.70					rem	0.02-0.06								
331		65.0-68.0			<0.06				0.8-1.5					rem									
332		65.0-68.0			<0.07				1.5-2.5					rem									
335		62.0-65.0			<0.15				0.25-0.70					rem									
335.3		62.5-66.5			<0.10				0.30-0.80					rem	0.02-0.06								
340		62.0-65.0			<0.15				0.8-1.5					rem									
342		62.0-65.0			<0.15				1.5-2.5					rem									
344		62.0-66.0			<0.10				0.50-1.00					rem									
345		62.0-65.0			<0.15				1.5-2.5					rem									
347		62.5-64.5			<0.10				1.0-1.8					rem									
348		61.5-63.5			<0.10				0.40-0.80					rem									
349		61.0-64.0			<0.10				0.10-0.50					rem									
350		60.0-63.0			<0.15				0.8-2.0					rem									
353		60.0-63.0			<0.15				1.5-2.5					rem									
353.3		60.5-64.0			<0.10-0.30				1.5-3.5					rem	0.02-0.25								
353.4		60.0-63.0							1.5-2.5					rem									
356		60.0-63.0			<0.15				2.0-3.0					rem									
360		60.0-63.0			<0.35				2.5-3.7					rem									
362		60.0-63.0			<0.15				3.5-4.5					rem									
365		58.0-61.0			<0.15				0.25-0.70				<0.25	rem									
366		58.0-61.0			<0.15				0.25-0.70				<0.25	rem	0.02-0.06								
367		58.0-61.0			<0.15				0.24-0.70		0.02-0.10			rem									
368		58.0-61.0			<0.15			0.02-0.10	0.25-0.70				<0.25	rem									
370		59.0-62.0			<0.15				0.8-1.5					rem									
371		58.0-62.0			<0.15				0.6-1.2					rem									
377		58.0-61.0			<0.30				1.5-2.5					rem									
377.1		56.5-60.0			<0.30				1.0-2.5					rem									
378		56.0-59.0			<0.30				1.5-2.5					rem									
380		55.0-60.0		<0.50	<0.35				1.5-2.5				<0.30	rem									
380.1		55.0-60.0		0.10-0.60	<0.30				1.5-3.0					rem									
385		55.0-59.0			<0.35				2.5-3.5					rem									
<b>Alloy</b>	<b>Notes</b>	<b>Cu</b>	<b>Ag</b>	<b>Al</b>	<b>Fe</b>	<b>Mn</b>	<b>Ni</b>	<b>P</b>	<b>Pb</b>	<b>S</b>	<b>Sb</b>	<b>Si</b>	<b>Sn</b>	<b>Zn</b>	<b>As</b>	<b>Be</b>	<b>Bi</b>	<b>Co</b>	<b>Cr</b>	<b>Mg</b>	<b>Ti</b>	<b>Zr</b>	

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
385.1		56.0-60.0							2.5-4.5					rem								
385.9		56.5-60.0			<0.35				2.0-3.5					rem								
386		56.0-59.0			<0.35				2.5-3.5					rem								
404		rem									<0.02		0.35-0.70	2.0-3.0								
405		94.0-96.0			<0.05				<0.05				0.7-1.3	rem								
408		94.0-96.0			<0.05				<0.05				1.8-2.2	rem								
408.1		94.5-96.5			0.08-0.12		0.11-0.20	0.028-0.040	<0.05				1.8-2.2	rem								
408.2		>94.00			<0.05		0.10-0.50	<0.05	<0.02				1.0-2.5	0.20-2.50								
408.5		94.5-96.5			0.05-0.20		0.05-0.20	0.02-0.04	<0.05				2.6-4.0	rem								
408.6		94.0-96.0			0.01-0.20		0.05-0.20	0.02-0.04	<0.05				1.7-2.3	rem								
409		92.0-94.0			<0.05				<0.05				0.50-0.80	rem								
410		91.0-93.0			<0.05				<0.10				2.0-2.8	rem								
411		89.0-92.0			<0.05				<0.10				0.30-0.70	rem								
411.2		89.0-92.0			0.05-0.20		0.05-0.20	0.02-0.05	<0.05				0.30-0.70	rem								
413		89.0-93.0			<0.05				<0.10				0.7-1.3	rem								
415		89.0-93.0			<0.05				<0.10				1.5-2.2	rem								
419		89.0-92.0			<0.05				<0.10				4.8-3.5	rem								
420		88.0-91.0			<0.05			<0.25	<0.05				1.5-2.0	rem								
421		87.5-89.0			<0.05	0.15-0.35		<0.35	<0.05				2.2-3.0	rem								
422		86.0-89.0			<0.05			<0.35	<0.05				0.8-1.4	rem								
422.2		86.0-91.0			0.05-0.20			0.02-0.05	<0.05				0.7-1.4	rem								
425		87.0-90.0			<0.05			<0.35	<0.05				1.5-3.0	rem								
425.2		88.0-91.0			0.05-0.20		0.05-0.20	0.02-0.04	<0.05				1.5-3.0	rem								
426		87.0-90.0			0.05-0.20		0.05-0.20	0.02-0.05	<0.05				2.5-4.0	rem								
430		84.0-87.0			<0.05				<0.10				1.7-2.7	rem								
432		85.0-88.0			<0.05			<0.35	<0.05				0.40-0.60	rem								
434		84.0-87.0			<0.05				<0.05				0.40-1.00	rem								
435		79.0-83.0			<0.05				<0.10				0.6-1.2	rem								
436		80.0-83.0			<0.05				<0.05				0.20-0.50	rem								
438		79.0-82.0			<0.05				<0.05				1.0-1.5	rem								
442.5		73.0-76.0			<0.20		<0.20	<0.10	<0.07				0.50-1.50	rem								
443		70.0-73.0			<0.06				<0.07				0.8-1.2	rem								
444		70.0-73.0			<0.06				<0.07		0.02-0.10		0.8-1.2	rem								
445		70.0-73.0			<0.06				<0.07				0.8-1.2	rem								
454.5		65.0-66.0		0.20-0.40				0.10-0.30	<0.07				0.10-0.30	rem								
462		62.0-65.0		<0.10	<0.10				<0.20				0.50-1.00	rem								
464.1		61.0-64.0		<0.03	<0.10				<0.05			<0.50	<1.00	rem								
464		59.0-62.0			<0.10				<0.20				0.50-1.00	rem								
464.2		61.0-63.5			<0.20				<0.20				1.0-1.4	rem								
465		59.0-62.0			<0.10				<0.20				0.50-1.00	rem								
466		59.0-62.0			<0.10				<0.20		0.02-0.10		0.50-1.00	rem								
467		59.0-62.0			<0.10			0.02-0.10	<0.20				0.50-1.00	rem								
470		57.0-61.0		<0.01	<0.10				<0.05				0.25-1.00	rem								
472		49.0-52.0			<0.10				<0.50				3.0-4.0	rem								
476		86.0-88.0			<0.05	0.05-0.15		0.03-0.07	1.8-2.2				1.8-2.2	rem								
479.4	Ni = Ni+Co	63.0-66.0			0.10-1.00		0.10-0.50		1.0-2.0				1.2-2.0	rem								
482		59.0-62.0			<0.10				0.40-1.00				0.50-1.00	rem								
485		59.0-62.0			<0.10				1.5-2.2				0.50-1.00	rem								
485.1		59.0-62.0			<0.10				1.0-2.5				0.7-1.5	rem								
486		59.0-62.0			<0.10				1.0-2.5				0.8-1.5	rem								
490.8		49.0-52.0		<0.10	<0.10				<0.50				3.0-4.0	rem								
501		rem			<0.05				<0.05				0.50-0.80	rem								
502		rem			<0.10				<0.05				1.0-1.5	rem								
505		rem			<0.10				<0.05				1.0-1.7	<0.30								
505.1		rem			<0.10				<0.05				1.0-1.5	0.10-0.25								
505.8		rem			0.05-0.20		0.05-0.20	0.02-0.10	<0.05				1.0-1.7	<0.30								
505.9		>97.00			0.05-0.40			0.02-0.15	<0.02				0.5-1.5	<0.50								
507		rem			<0.10			<0.30	<0.05				1.5-2.0	rem								
507.05		>96.50			0.10-0.40			0.04-0.15	<0.02				1.5-2.0	<0.50								
507.1		rem			<0.10		0.10-0.40	<0.15	<0.05				1.7-2.3	rem								
507.15		rem			0.05-0.15			0.025-0.040	<0.02				1.7-2.3	rem								
507.25		>94.00			0.05-0.20			0.02-0.06	<0.02				1.5-2.5	1.5-3.0								
507.8		rem			0.05-0.20		0.05-0.20	0.020-0.100	<0.05				1.7-2.3	<0.30								
508		rem			<0.10			0.01-0.07	<0.05				2.6-3.4	rem								
509		rem			<0.10			0.03-0.30	<0.05				2.5-3.8	<0.30								
510		rem			<0.10			0.03-0.35	<0.05				4.2-5.8	<0.30								
510.8		rem			0.05-0.20		0.05-0.20	0.02-0.10	<0.05				4.8-5.8	<0.30								
511		rem			<0.10			0.03-0.35	<0.05				3.5-4.9	<0.30								
511.8		rem			0.05-0.20		0.11-0.20	0.02-0.10	<0.05				3.5-4.9	<0.30								
511.9		rem			0.05-0.15			0.025-0.045	<0.02				3.0-6.5	<0.30								
Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
518		rem		<0.01	<0.10			0.10-0.35	<0.02				4.0-6.0									
519		rem			<0.10			0.03-0.35	<0.05				5.0-7.0	<0.30								
519.8		rem			0.05-0.20			0.02-0.10	<0.05				5.0-7.0	<0.30								
521		rem			<0.10			0.03-0.35	<0.05				7.0-9.0	<0.20								
521.8		rem			0.05-0.20			0.02-0.10	<0.05				7.0-9.0	<0.30								
524		rem			<0.10			0.03-0.35	<0.05				9.0-11.0	<0.20								
524.8		rem			0.05-0.20			0.02-0.10	<0.05				9.0-11.0	<0.30								
526	Cu-Mn-P-Sn >99.5	rem			<0.10	1.0-2.0		0.03-0.35	<0.05				2.2-3.3	<0.20								
529	Cu-Mn-P-Sn >99.5	rem			<0.10	1.0-2.0		0.03-0.35	<0.05				7.0-9.0	<0.20								
532		rem			<0.10			0.03-0.35	<0.05				4.0-6.0	<0.20								
534		rem			<0.10			0.03-0.35	0.8-1.2				3.5-5.8	<0.30								
544		rem			<0.10			0.01-0.50	3.5-4.5				3.5-4.5	1.5-4.5								
546	Cu-Pb-Pb-Sn-Zn >99.5				<0.10			<0.50	3.5-4.5				3.5-4.5	1.5-4.5								
548	Cu-Pb-Pb-Sn-Zn >99.5				<0.10			0.03-0.35	4.0-6.0				4.0-6.0	<0.30								
551.8	Cu-P >99.85	rem						4.8-5.2														
551.81	Cu-P >99.85	rem						7.0-7.5														
552.8		rem	1.80-2.20					6.8-7.2														
552.81		rem	4.80-5.20					6.8-7.2														
552.82		rem	4.80-5.20					6.5-7.0														
552.83		rem	5.80-6.20					7.0-7.5														
552.84		rem	14.5-15.5					4.8-5.2														
552.85		rem	17.2-18.0					6.0-6.7														
560		rem	29-31										30-34									
606		rem		4.0-7.0	<0.50																	
607		rem		2.3-2.9					<0.01				1.7-2.0									
608		rem		5.0-6.5	<0.10				<0.10					0.20-0.35								
610		rem		6.0-8.5	<0.50				<0.02					<0.20								
613		rem		6.0-7.5	2.0-3.0	<0.20	<0.15	<0.015	<0.01				0.20-0.50	<0.10								
614		rem		6.0-8.0	1.5-3.5	<1.00	1.8-2.2	<0.015	<0.01					<0.20								
615	Cu = Ag-Cu	rem		7.7-8.3					<0.015					<0.20								
615.5	Cu = Ag-Cu	rem		5.5-6.5	<0.20		1.5-2.5		<0.05				<0.50	<0.80								
618	Cu = Ag-Cu	rem		8.5-11.0	0.50-1.50				<0.02				<0.10	<0.02								
619	Cu = Ag-Cu	rem		8.5-10.0	3.0-4.5				<0.02				<0.10	<0.80								
622	Cu = Ag-Cu	rem		11.0-12.0	3.0-4.2				<0.02				<0.10	<0.02								
623	Cu = Ag-Cu	rem		8.5-10.0	2.0-4.0	<0.50	<1.0		<0.02				<0.25	<0.60								
624	Cu = Ag-Cu	rem		10.0-11.5	2.0-4.5	<0.30							<0.25	<0.20								
625	Cu = Ag-Cu	rem		12.5-13.5	3.5-5.0	<2.00							<0.04	<0.02								
625.8	Cu = Ag-Cu	rem		12.0-13.0	3.0-5.0				<0.02				<0.04	<0.02								
625.81	Cu = Ag-Cu	rem		13.0-14.0	3.0-5.0				<0.02				<0.04	<0.02								
625.82	Cu = Ag-Cu	rem		14.0-15.0	3.0-5.0				<0.02				<0.04	<0.02								
627.3	Cu = Ag-Cu	rem		8.5-11.0	4.0-6.0	<0.50	4.0-6.0		<0.05				<0.10	<0.40								<0.05
630	Cu = Ag-Cu	rem		9.0-11.0	2.0-4.0	<1.50	4.0-5.5		<0.02				<0.25	<0.30								
630.1	Cu = Ag-Cu	>78.00		9.7-10.9	2.0-3.5	<1.50	4.5-5.5		<0.02				<0.20	<0.30								
630.2	Cu = Ag-Cu	>74.50		10.5-11.5	4.0-5.5	<1.50	4.2-6.0		<0.03				<0.25	<0.30			<0.20	<0.05				
632	Cu = Ag-Cu	rem		8.7-9.5	3.5-4.3	1.2-2.0	4.0-4.8		<0.02				<0.10	<0.30				<0.20	<0.15			
632.3	Cu = Ag-Cu	75.9-84.5		8.5-9.5	3.0-5.0	<3.50	4.0-5.5		<0.02				<0.10	<0.30								
632.8	Cu = Ag-Cu	rem		8.5-9.5	3.0-5.0	0.6-3.5	4.0-5.5		<0.02				<0.10	<0.30								
633	Cu = Ag-Cu	rem		5.0-7.5	2.0-6.0	11.0-13.0	1.0-2.5		<0.02				<1.50	<1.50								
633.8	Cu = Ag-Cu	rem		7.0-8.5	2.0-4.0	11.0-14.0	1.5-3.0		<0.02				<0.10	<0.15								
634	Cu = Ag-Cu	rem		2.6-3.2	<0.15		<0.15		<0.05				0.25-0.45	<0.20	<0.15							
636	Cu = Ag-Cu	rem		3.0-4.0	<0.15		<0.15		<0.05				0.7-1.3	<0.20	<0.15			0.25-0.55				
638	Cu = Ag-Cu	rem		2.5-3.1	<0.20	<0.10	<0.20		<0.05				1.5-2.1	<0.80								
641.1	Cu = Ag-Cu	rem		8.0-11.0	<0.50	<0.50	1.0-2.0		1.0-2.0				1.5-2.2	<0.20	<0.15							
642	Cu = Ag-Cu	rem		6.3-7.6	<0.30	<0.10	<0.25		<0.05				1.5-2.2	<0.20	<0.15							
642.1	Cu = Ag-Cu	rem		6.3-7.0	<0.30	<0.10	<0.25		<0.05				1.5-2.0	<0.20	<0.15							
642.5	Cu = Ag-Cu	rem		5.5-7.5	<1.00	<0.50	<0.50		<0.05				1.5-3.0	<0.20	<0.15							
644	Cu = Ag-Cu	rem		3.5-4.5	<0.05		4.2-5.0		<0.03				0.8-1.3	<0.10	<0.20							
647	Cu = Ag-Cu	rem			<0.10		1.6-2.2		<0.10				0.40-0.80	<0.50								
647.1	Cu = Ag-Cu	rem				<0.10	2.9-3.5		<0.10				0.50-0.90	0.20-0.50								
647.2	Cu = Ag-Cu	rem				<0.10	1.6-2.2		<0.10				0.35-0.60	0.10-0.40								0.01-0.03
647.5	Cu = Ag-Cu	Ca <0.01			<0.25		1.5-2.7		<0.01				0.20-0.80	0.50-1.50								<0.20
647.3	Cu = Ag-Cu	>93.50			<0.10	<0.10	2.9-3.5		<0.01				0.50-0.90	0.20-0.50								<0.20
647.4	Cu = Ag-Cu	>95.00			<1.00	<0.70	1.0-2.0		<0.01				0.05-0.50	1.5-2.5								<0.05
647.5	Cu = Ag-Cu	rem			<1.00		1.0-3.0		<0.02				0.10-0.70	0.05-0.80								<0.10
647.6	Cu = Ag-Cu	>93.50			0.10-0.40		0.40-2.50		<0.02				0.05-0.60	0.20-2.50								
647.8	Cu = Ag-Cu	>90.00			0.01-1.00	1.0-3.5			<0.02				0.20-0.90	0.10-2.00	0.20-2.50							<0.01
649	Cu = Ag-Cu	rem		<0.10	<0.10	<0.10	<0.10		<0.05				0.8-1.2	1.2-1.6	<0.20							<0.01
651	Cu = Ag-Cu	rem			<0.80				<0.05				0.8-2.0	<1.50								
653	Cu = Ag-Cu	rem			<0.80				<0.05													

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr	
655	Cu = Ag+Cu	rem			<0.80	0.50-1.30	<0.6		<0.05			2.8-3.8		<1.50									
656	Cu = Ag+Cu	rem		<0.01	<0.50	<1.50			<0.02				<1.50		<1.50								
656.2	Cu = Ag+Cu	>90.00			1.0-2.0	<1.00		<0.10				2.4-4.0		1.5-4.0									
658	Cu = Ag+Cu	rem			<0.25	0.50-1.30	<0.6		<0.05			2.8-3.8		<1.50									
661	Cu = Ag+Cu	rem			<0.25	<1.50			0.20-0.80			2.8-3.8		<1.50									
662	Cu = Ag+Cu	86.6-91.0			<0.05		0.30-1.00	0.05-0.20	<0.05				0.20-0.70	rem									
663	Cu = Ag+Cu	84.5-87.5			1.3-1.7		<0.05	<0.02	<0.05			<0.05	1.5-3.0	rem				<0.20					
664	Cu = Ag+Cu	rem			1.8-2.3		<0.05	<0.02	<0.015			<0.05	<0.05	11.0-12.0			0.30-0.70						
664.1	Cu = Ag+Cu	rem		<0.05	0.30-1.50				<0.015			<0.05	<0.05	11.0-12.0			0.30-0.70						
664.2	Cu = Ag+Cu	rem			0.30-1.50							<0.05	<0.05	12.7-17.0									
667	Cu = Ag+Cu	68.5-71.5		<0.25	<0.10	0.8-1.5	<0.25		<0.07				<0.30	rem									
668	Cu = Ag+Cu	60.0-63.0		<0.25	<0.35	2.0-3.5	<0.25		<0.30				<0.30	rem									
669	Cu = Ag+Cu	62.5-64.5		<0.25	<0.35	11.5-12.5	<0.25		<0.30				<0.30	rem									
669.5	Cu = Ag+Cu	rem		1.0-1.5	<0.50	14.0-15.0			<0.01				14.0-15.0	rem									
670	Cu = Ag+Cu	63.0-68.0			3.0-6.0	2.0-4.0			<0.20				<0.30	rem									
671.3	Cu = Ag+Cu	56.0-59.0		0.10-1.00		0.50-1.50	0.50-1.50		0.50-1.50				0.50-1.50	rem									
673	Cu = Ag+Cu	58.0-63.0		<0.25	<0.50	2.0-3.5	<0.25		0.40-3.00				<0.30	rem									
674	Cu = Ag+Cu	57.0-60.0		0.50-2.00	<0.35	2.0-3.5	<0.25		0.40-3.00				<0.30	rem									
674.1	Cu = Ag+Cu	55.5-59.0		1.3-2.3	<1.00	1.0-2.4	<2.0		<0.8				<0.30	rem									
674.2	Cu = Ag+Cu	57.0-58.5		1.0-2.0	0.15-0.55	1.5-2.5	<0.25		0.25-0.80				<0.35	rem									
675	Cu = Ag+Cu	57.0-60.0		<0.25	0.8-2.0	0.05-0.50			<0.20				0.50-1.50	rem									
676	Cu = Ag+Cu	57.0-60.0			0.40-1.30	0.05-0.50			0.50-1.00				0.05-1.50	rem									
676.2	Cu = Ag+Cu	55.0-57.0			0.50-1.20	1.0-2.0			0.50-1.00				0.05-1.50	rem									
677	Cu = Ag+Cu	55.5-58.0			0.7-1.5	0.05-0.30	1.5-2.3		0.50-1.00				<0.20	rem									
678	Cu = Ag+Cu	56.0-59.0		0.30-1.50		0.20-0.60			<0.30				<0.20	rem									
678.1	Cu = Ag+Cu	56.5-59.5		0.40-1.60	<1.00	0.40-1.80	<1.5		<1.0				<0.50	rem									
678.2	Cu = Ag+Cu	56.5-59.5		0.30-1.30	0.50-1.20	0.30-2.00			<1.0				<0.50	rem									
680	Cu = Ag+Cu	56.0-60.0		<0.01	0.25-1.25	0.01-0.50	0.20-0.80		<0.05				0.30-1.00	rem									
681	Cu = Ag+Cu	56.0-60.0		<0.01	0.25-1.25	0.01-0.50	0.20-0.80		<0.05				0.04-0.15	rem									
682	Cu = Ag+Cu	58.0-60.0			0.6-1.0	0.16-1.0			<0.05				0.07-0.15	rem									
686	Cu = Ag+Cu	56.0-60.0		0.30-1.50	0.50-1.20	0.30-2.00			0.50-1.50				0.20-1.00	rem									
687	Cu = Ag+Cu	76.0-79.0		1.8-2.5	<0.06				<0.07				0.20-1.00	rem									
688	Cu = Ag+Cu	72.0-74.6		3.0-3.8	<0.20				<0.05				21.3-24.1	rem				0.25-0.55					
690.5	Cu = Ag+Cu	70.0-75.0		3.0-4.0	<0.05		0.50-0.80		<0.025				0.10-0.60	rem									0.01-0.20
690.5	Cu = Ag+Cu	Al+Zn 25.1-27.1					0.50-1.50							rem									
690.5	Cu = Ag+Cu													rem									
691	Cu = Ag+Cu	81.0-84.0		0.7-1.2	<0.25	<0.10	0.8-1.4		<0.05				<0.10	rem									
694	Cu = Ag+Cu	80.0-83.0			<0.20				<0.30				0.8-1.3	rem									
694.3	Cu = Ag+Cu	80.0-83.0			<0.20				<0.30				3.5-4.5	rem									
694.4	Cu = Ag+Cu	80.0-83.0			<0.20				<0.30				3.5-4.5	rem									
694.5	Cu = Ag+Cu	80.0-83.0			<0.20	<0.40		0.03-0.06	<0.30				3.5-4.5	rem									
697	Cu = Ag+Cu	75.0-80.0			<0.20	<0.40	<0.50		0.50-1.50				2.5-3.5	rem									
697.1	Cu = Ag+Cu	75.0-80.0			<0.20	<0.40	<0.50		0.50-1.50				2.5-3.5	rem									
697.2	Cu = Ag+Cu	75.0-80.0			<0.20	<0.40	<0.50		0.50-1.50				2.5-3.5	rem									
697.3	Cu = Ag+Cu	75.0-80.0			<0.20	<0.40	<0.50		0.50-1.50				2.5-3.5	rem									
698	Cu = Ag+Cu	66.0-70.0			<0.4		<0.50		<0.8				0.7-1.3	rem									
699	Cu=Ag+Cu, Cd <0.05		<0.05	1.4-2.3	<0.10	40.0-48.0	<0.10		<0.02				<0.14	rem			<0.20						
699.1	Cu = Ag+Cu	rem		0.25-0.80	1.0-1.4	28.0-32.0	0.8-1.4		<0.01				3.0-5.0	rem									
699.5	Cu = Ag+Cu	51.0-54.0			36.0-40.0	8.5-10.5			<0.01				<0.25	rem									
701	Cu = Ag+Cu	rem			<0.05	<0.50	3.0-4.0		<0.05				<0.25	rem									
702	Cu = Ag+Cu	rem			<0.10	<0.40	2.0-3.0		<0.05				<0.25	rem									
702.3	Cu = Ag+Cu	Ag+B <0.10			<0.10	<0.10	2.2-3.2		<0.05				0.40-0.80	0.50-2.00						0.05-0.30			
702.5	Cu = Ag+Cu	rem			<0.20	<0.10	2.2-4.2		<0.05				0.25-1.20	<1.00									
702.6	Cu = Ag+Cu	rem			<0.20	<0.10	4.0-7.5	<0.01	<0.05				0.20-0.70	<1.00									
702.7	Cu = Ag+Cu	rem			0.28-1.00	<0.15	1.0-3.0		<0.05				0.20-1.00	<1.00									
702.8	Cu = Ag+Cu	rem			<0.015		1.3-1.7	0.020-0.040	<0.02				0.22-0.30	1.0-1.5									
702.9	Cu = Ag+Cu	rem			<0.15	<0.50	1.3-1.7	0.020-0.040	<0.02				0.22-0.30	2.1-2.7									
703	Cu = Ag+Cu	>99.50			<0.05	<0.50	2.5-5.0		<0.05				0.20-1.20	<1.00									
703.2	Cu = Ag+Cu	rem		0.20-1.20	1.3-1.7	0.30-0.80	4.8-6.2		<0.05				0.20-1.20	<1.00				0.18-0.50					
704	Cu = Ag+Cu	rem			1.0-1.8	0.30-1.50	4.5-6.0		<0.05				0.35-0.45	<1.00									
704.4	Cu = Ag+Cu	C<0.05			1.0-1.8	0.30-1.50	4.5-6.0		<0.05				0.35-0.45	<1.00									
705	Cu = Ag+Cu	rem			<0.10	<0.15	5.8-7.8		<0.05					<0.20									
706	Cu = Ag+Cu	rem			1.0-1.8	<1.00	9.0-11.0		<0.05					<0.20									
706.1	Cu = Ag+Cu	C<0.05			1.0-2.0	1.00-1.10	10.0-11.0		<0.05					<0.20									
706.2	Cu = Ag+Cu	C<0.05			1.0-1.8	<1.00																	



Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
815		>98.00		<0.10	<0.10				<0.02			<0.15	<0.10	<0.10					0.40-1.50			
815.4		>95.10		<0.10	<0.15		2.0-3.0		<0.02			0.40-0.80	<0.10	<0.10					0.40-0.60			
817		>94.20	0.80-1.20				0.25-1.50											0.25-1.50				
818		>95.60	0.80-1.20				<0.20		<0.02			<0.15	<0.10	<0.10				1.4-1.7				
820		>95.00		<0.10	<0.10				<0.02			<0.15	<0.10	<0.10				2.4-2.7	<0.10			
821		>95.50					0.25-1.50											0.25-1.50				
822		>96.50					1.0-2.0											0.35-0.80				
824		>96.40		<0.15	<0.20		<0.10		<0.02				<0.10	<0.10				0.20-0.40	<0.10			
825		>95.50		<0.15	<0.25		<0.20		<0.02			0.20-0.35	<0.10	<0.10				1.65-1.75				
825.1		>95.50		<0.15	<0.25		<0.20		<0.02			0.20-0.35	<0.10	<0.10				1.90-2.15	<0.10			
826		>95.20		<0.15	<0.25		<0.20		<0.02			0.20-0.35	<0.10	<0.10				0.35-0.70	<0.10			
827		>94.60		<0.15	<0.25		1.0-1.5		<0.02			<0.15	<0.10	<0.10				2.25-2.45	<0.10			
828		>94.80		<0.15	<0.25		<0.20		<0.02			0.20-0.35	<0.10	<0.10				2.35-2.55	<0.10			
833		92.0-94.0							1.0-2.0				1.0-2.0	<0.10				0.35-0.70	<0.10			
834		86.0-92.0							<0.50				<0.20	8.0-12.0								
834.1		86.0-91.0		<0.005	<0.05		<0.05		<0.10			<0.005	1.0-2.0	rem								
834.2		86.0-92.0		<0.005	<0.10		<0.50		<0.50			0.25-0.70	rem	rem								
834.5		87.0-89.0		<0.005	<0.30		0.8-2.0	<0.03	1.5-3.0	<0.08	<0.25	<0.005	2.0-3.5	5.5-7.5								
835		86.0-88.0		<0.008	<0.25		0.50-1.00	<0.03	3.5-4.5	<0.08	<0.25	<0.005	5.5-6.5	1.0-2.5								
835.2		rem		<0.008	<0.30		<1.0	<0.05	3.5-4.5	<0.08	<0.25	<0.005	3.5-4.5	1.5-4.0								
836		84.0-86.0		<0.005	<0.30		<1.0	<0.05	4.0-6.0	<0.08	<0.25	<0.005	4.0-6.0	4.0-6.0								
837		83.0-88.0		<0.005	<0.30		<0.30	<0.05	<0.50	<0.08	<0.25	<0.005	<1.00	rem								
838		82.0-83.8		<0.005	<0.30		<1.0	<0.03	5.0-7.0	<0.08	<0.25	<0.005	3.3-4.2	5.0-8.0								
838.1		rem		<0.01	<0.50		<2.0	<0.05	4.0-6.0	<0.08	<0.25	<0.005	2.0-3.5	7.5-9.5								
842		78.0-82.0		<0.005	<0.40		<0.8	<0.05	2.0-3.0	<0.08	<0.25	<0.005	4.0-6.0	10.0-16.0					<0.10			
844		78.0-82.0		<0.005	<0.40		<1.0	<0.20	6.0-8.0	<0.08	<0.25	<0.005	2.3-3.5	7.0-10.0								
844.1		rem		<0.01	<0.40		<1.0	<0.02	7.0-9.0	<0.08	<0.25	<0.20	3.0-4.5	7.0-11.0								
845		77.0-79.0		<0.005	<0.40		<1.0	<0.02	6.0-7.5	<0.08	<0.25	<0.005	2.0-4.0	10.0-14.0								
848		75.0-77.0		<0.005	<0.40		<1.0	<0.02	5.5-7.0	<0.08	<0.25	<0.005	2.0-3.0	13.0-17.0								
852		70.0-74.0		<0.005	<0.60		<1.0	<0.02	1.5-3.8	<0.05	<0.20	<0.05	0.7-2.0	20.0-27.0								
852.1		70.0-75.0		<0.005	<0.80		<1.0		2.0-5.0			<0.005	1.0-3.0	rem	0.02-0.06							
853		66.0-72.0		<0.01	<0.80		<1.0		<0.50				<0.50	rem								
853.1		66.0-73.0		<0.01	<0.80		<1.0		2.0-5.0				<1.50	rem	0.02-0.06							
854		65.0-70.0		<0.35	<0.70		<1.0		1.5-3.8			<0.05	0.50-1.50	24.0-32.0								
855		59.0-63.0		<0.20	<0.20		<0.20		<0.20				<0.20	rem								
Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
856	Cu = Cu-Ni	59.0-63.0		<0.8	<0.20	<0.20	<0.20		<0.20			<0.05	<0.20	rem								
857	Cu = Cu-Ni	58.0-64.0		0.20-0.80	<0.70	<0.50	<1.0		0.8-1.5			<0.05	0.50-1.50	32.0-40.0								
857.1	Cu = Cu-Ni	58.0-63.0		0.20-0.80	<0.80	<0.50	<1.0		1.0-2.5			<0.05	<1.00	rem								
858	Cu = Cu-Ni	>57.00		4.5-5.5	2.0-4.0	2.5-5.0		<0.01	<1.5	<0.05	<0.05	<1.50	<1.50	31.0-41.0	<0.05							
861	Cu = Cu-Ni	66.0-68.0		4.5-5.5	2.0-4.0	2.5-5.0			<0.20			<1.50	<1.50	rem								
862	Cu = Cu-Ni	60.0-66.0		3.0-4.9	2.0-4.0	2.5-5.0	<1.0		<0.20				<0.20	22.0-28.0								
863	Cu = Cu-Ni	60.0-66.0		5.0-7.5	2.0-4.0	2.5-5.0	<1.0		<0.20				<0.20	22.0-28.0								
864	Cu = Cu-Ni	56.0-62.0		0.50-1.50	0.40-2.00	0.10-1.00	<1.0		0.50-1.50				0.50-1.50	34.0-42.0								
865	Cu = Cu-Ni	55.0-60.0		0.50-1.50	0.40-2.00	1.0-1.5	<1.0		<0.40				<1.00	36.0-42.0								
865.5	Cu = Cu-Ni	>57.00		0.50-2.50	0.7-2.0	0.10-3.00	<1.0		<0.50			<1.00	<1.00	rem								
867	Cu = Cu-Ni	53.0-60.0		1.0-3.0	1.0-3.0	1.0-3.5	<1.0		0.5-1.5				<1.50	30.0-38.0								
868	Cu = Cu-Ni	53.5-57.0		<2.0	1.0-2.5	2.5-4.0	<1.0		<0.20				<1.00	<5.00								
872		>89.00		<1.5	<0.20	<1.50			<0.50			1.0-5.0	<1.00	<0.25								
873		>94.00		<0.8	<0.20	0.8-1.5			<0.20			3.5-4.5	<0.25	<0.25								
874		>93.00		<0.8	<0.20				<1.0			2.5-4.0		12.0-16.0								
874.1		>93.00		<0.8					<1.0			2.5-4.0		12.0-16.0	0.03-0.06							
874.2		>93.00		<0.8					<1.0		0.03-0.06	2.5-4.0		12.0-16.0								
874.3		>93.00		<0.8				0.03-0.06	<1.0			2.5-4.0		12.0-16.0								
875		>93.00		<0.50					<0.50			3.0-5.0		12.0-16.0								
875.1		>93.00		<0.50					<0.50			3.0-5.0		12.0-16.0	0.03-0.06							
875.2		>93.00		<0.50					<0.50		0.03-0.06	3.0-5.0		12.0-16.0								
875.3		>93.00		<0.50				0.03-0.06	<0.50			3.0-5.0		12.0-16.0								
876		>88.00		<0.20	<0.20	<0.25			<0.50			3.5-4.5		4.0-7.0								
876.1		>90.00		<0.20	<0.20	<0.25			<0.20			3.0-5.0		3.0-5.0								
878		>80.00		<0.15	<0.15	<0.15	<0.20	<0.01	<0.15	<0.05	<0.05	3.8-4.2	<0.25	12.0-16.0	<0.05						<0.01	
879		>63.00		<0.15	<0.40	<0.15	<0.50	<0.01	<0.25	<0.05	<0.05	0.8-1.2	<0.25	30.0-36.0	<0.05							
893.21		87.0-91.0		<0.005	<0.20		<1.0	<0.30	<0.09	<0.08	<0.35	<0.005	5.0-7.0	<1.00								



Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
958.2		>77.50		9.0-10.0	4.0-5.0	<1.50	4.5-5.8	.	<0.02	.	.	<0.10	<0.20	<0.20	.	.	.	.	.	.	.	.
959		rem		12.0-13.5	3.0-5.0	<1.50	<0.50	<0.02	<0.01	<0.02	.	<0.50	.	.	.	.	.	.	.	.	.	.
962	C <0.10, Nb <0.00	rem			1.0-1.8	<1.50	9.0-11.0	<0.02	<0.01	<0.02	.	<0.50	.	.	.	.	.	.	.	.	.	.
963	C <0.15, Nb 0.50-1.50	rem			0.50-1.50	0.25-1.50	18.0-22.0	<0.02	<0.01	<0.02	.	<0.50	.	.	.	.	.	.	.	.	.	.
964	C <0.15, Nb 0.50-1.50	rem			0.25-1.50	<1.50	28.0-32.0	<0.02	<0.03	<0.02	.	<0.50	.	.	.	.	.	.	.	.	.	.
966		rem			0.8-1.1	<1.00	29.0-33.0	.	<0.01	.	.	<0.15	.	.	0.40-0.70	.	.	.	.	.	0.01-0.20	0.1-0.2
967		rem			0.7-1.0	<0.70	29.0-33.0	<0.01	<0.01	.	.	<0.15	.	.	1.10-1.20	.	.	.	.	0.005-0.15	<0.01	.
969	Nb 0.10-0.30, B <0.01	rem		<0.10	<0.50	0.05-0.30	9.5-10.5	<0.005	<0.005	<0.0025	<0.02	<0.05	7.5-8.5	<1.00	.	.	.	.	.	<0.15	.	.
968	Nb <0.10	rem			<0.50	0.50-0.30	14.5-15.5	<0.02	<0.02	.	.	<0.30	5.8-8.5	<0.50	.	.	.	.	.	<0.15	.	.
969.5	Nb <0.10	rem			<0.50	0.05-0.40	11.0-15.5	.	<0.02	.	.	<0.30	5.8-8.5	<0.50	.	.	.	.	.	<0.15	.	.
973		53.0-58.0		<0.005	<1.50	<0.50	11.0-14.0	<0.05	8.0-11.0	<0.08	<0.35	<0.15	1.5-3.0	17.0-25.0	.	.	.	.	.	.	.	.
974		58.0-61.0			<1.50	<0.50	15.5-17.0	<0.05	4.5-5.5	<0.08	<0.25	<0.15	2.5-3.5	rem	.	.	.	.	.	.	.	.
976		63.0-67.0		<0.005	<1.50	<1.00	19.0-21.5	<0.05	3.0-5.0	<0.08	<0.25	<0.15	3.5-4.5	3.0-5.0	.	.	.	.	.	.	.	.
978		64.0-67.0		<0.005	<1.50	<1.00	24.0-27.0	<0.05	1.0-2.5	<0.08	<0.20	<0.15	4.0-4.5	1.0-4.0	.	.	.	.	.	.	.	.
982		73.0-79.0			<0.70	.	<0.50	<0.10	21.0-27.0	.	<0.30	.	0.6-2.0	<0.50	.	.	.	.	.	.	.	.
984		rem	<1.50		<0.70	.	<0.50	<0.10	26.0-33.0	.	<0.50	.	<0.50	<0.50	.	.	.	.	.	.	.	.
986		60.0-70.0	<1.50		<0.35	.	<0.50	<0.10	30.0-40.0	.	<0.50	.	<0.50	<0.50	.	.	.	.	.	.	.	.
988		56.5-62.5	<1.50		<0.35	.	.	<0.02	37.5-42.5	.	.	.	<0.25	<0.10	.	.	.	.	.	.	.	.
988.2		rem			<0.35	.	.	.	40.0-44.0	.	.	.	1.0-3.0	.	.	.	.	.	.	.	.	.
988.4		rem			<0.35	.	.	.	44.0-58.0	.	.	.	1.0-3.0	.	.	.	.	.	.	.	.	.
993	Incramet 800	rem		10.7-11.5	0.40-1.00	.	13.5-16.5	.	<0.02	.	.	<0.02	<0.05	.	.	.	1.0-2.0	.	.	.	.	.
993.5		rem		9.5-10.5	<1.00	<0.25	14.5-16.0	.	<0.15	.	.	.	7.5-9.5	.	.	.	.	.	.	.	.	.
994		rem		0.50-2.00	1.0-3.0	<0.50	1.0-3.5	.	<0.25	.	.	0.50-2.00	.	0.50-5.00	.	.	.	.	.	.	.	.
995		rem		0.50-2.00	3.0-5.0	<0.50	3.5-5.5	.	<0.25	.	.	0.50-2.00	.	0.50-2.00	.	.	.	.	.	.	.	.
996	C <0.05	rem		1.0-2.8	<0.20	39.0-45.0	<0.20	.	<0.02	.	.	<0.10	<0.10	<0.20	.	.	.	<0.20	.	.	.	.
997	Nb 4.0-6.0	>54.00		0.50-3.00	<1.00	11.0-15.0	4.0-6.0	.	<2.0	.	.	.	<1.00	19.0-25.0	.	.	.	.	.	.	.	.
997.5		55.0-61.0		0.25-3.00	<1.00	17.0-23.0	<3.0	.	0.50-2.50	.	.	.	0.50-2.50	17.0-23.0	.	.	.	.	.	.	.	.

These are specifications for reference purpose only, not samples for sale