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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 ~25mm

Number	Ag	As	Bi	Cd	Co	Cr	Fe	Mn	Ni	P	Pb	S	Sb	Se	Si	Sn	Te	Zn	Other
AVAILABLE INDIVIDUALLY																			
VS MO4-K3	299	310	124	285	98	115	419	296	551	261	495	70	332	287	93	489	289	293	
VS MO4-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 MO4-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 MO4-7	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	
VS MO4-5	30.1	11.0	5.2	1.0	1.0	0.8	5.1	6.4	4.4	0.93	1.9	2.9	8.3	6.1	3.1	2.0	2.9	16.9	
VS MO4-6 *	21.0	19.8	10.7	10.0	9.2	11.1	40.4	20.0	32.4	14.0	60	19	22.4	10.6	21	14.6	8	32.4	* SET ONLY
VS MO4-K1*	15.3	16.0	17.4	15.3	15.2	11.7	25.6	17.5	13.7	12.1	22.4	14.5	17.0	10.3	24.9	10.0	9.6	18.0	* SET ONLY
VS MO4-1 *	11.2	0.96	.	0.19	.	.	2.0	0.97	0.34	.	1.1	2.9	2.8	3.2	0.7	.	.	.	* SET ONLY
VS MO4-4 *	10.4	4.0	2.6	3.1	4.9	3.2	15.4	4.7	16.0	1.1	0.82	3.0	3.5	2.4	2.2	4.8	4.3	7.8	* SET ONLY
VS MO4-8 *	5.0	2.4	1.1	0.49	3.0	.	29.1	3.5	1.8	1.3	9.6	8.7	5.8	0.73	4.6	0.96	0.8	3.2	* SET ONLY
VS MO4-3 *	2.9	.	0.11	.	0.30	.	3.9	0.49	0.73	.	4.2	4.4	0.55	.	.	0.48	.	0.97	* SET ONLY
VS MO4-2 *	0.88	0.6	0.63	0.14	0.26	1.0	40.5	1.1	1.1	2.1	13.2	12.8	0.8	0.7	7.1	1.1	.	2.4	* SET ONLY
AVAILABLE INDIVIDUALLY EXCEPT CS3 WHICH IS SET ONLY **17034**																			
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)
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)
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)
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)
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)

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

analysis listed in mg/kg 40 mm Ø x 30 mm

Number	Fe	P	Sn
BAM 391	0.90	3.3	(<0.1)
BAM 390	0.79	1.3	(<0.1)
BAM 392	0.80	7.0	(<0.1

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/g 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	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 BAM, BCR, ERM: 38-40 mm Ø x 27-30 mm BS: 38 mm Ø x ~7 or 19+ mm CTIF: 40 mm Ø x 18 mm IARM: 31 mm Ø x 2 or 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	39X 17869AG	0.0186	0.0104	0.0401	0.0027	0.0084	0.0199	0.0365	0.0103	0.0325	0.0111	0.0245	0.0714	0.0069
1	IBAM 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	**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	IARM 70C	(0.0014)	(0.0009)	(0.002)	(0.0008)	(0.0014)	(0.0002)	(0.0016)	(0.0003)	(0.0002)	(0.0004)	(0.0014)	(0.0013)	0.0008
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 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)	0.0026	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	0.000024	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 CT6	.	0.0054	0.0040	.	0.011	.	0.014	.	.	0.011	0.011	0.0014	0.0069
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 381	.	<0.0001	<0.0001	<0.00004	<0.00004	0.000013	0.00028	(0.000034)	0.000027	0.000073	.	0.00005	(0.00029)
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

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	.	.	.	.	.	.	
39X 17869AG	0.0375	0.0197	0.0117	0.070	0.0392	.	0.0261	.	399	22	Ge: 0.0047	.	26	.		
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	.		
BAM M386a	0.00252	0.00097	(0.0012)	0.00216	0.00311	0.00347	0.00367	.	44.2	.	.	.	.	.	.	
BS Cu997	(0.0002)	.	(0.0009)	0.0003	.	**17025, 17034**	0.0006	(0.007)	.	.	7	.	99.7	.	39	17025
IARM 70C	(0.003)	(0.001)	(0.0006)	0.0005	(0.001)	.	(0.002)	(0.001)	this item only available as XRF coin							
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 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 CT6	0.011	0.011	.	0.013	0.012	.	0.030	.	39	.	.	.	.	.	.	B*: 60 last
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 381	<0.00015	<0.0001	<0.0005	0.00040	.	<0.00005	0.000522	<0.0009	.	.	.	.	.	.	.	
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

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 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	0.001 7	(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	**BS 172Be-2**	1.83	(0.06)	.	0.032	0.015	97.7	0.127	0.165	0.041	(0.029)	0.015	0.0057	172	**17025**
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	**BS 17510**	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	**17304**
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 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
BS 172Be-1	(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
BS 17510	<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 158C	1.04	(0.01)	0.002	0.090	0.019	0.32	0.01	0.02	0.01	0.014	.	98.5
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	**BS 18150A**	0.79	.	0.0023	0.007	0.0010	0.0019	0.0011	0.027	0.0144	0.0006	0.203	[98.9]
1	**BS 18150**	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 158C	(0.001)	0.002	0.002	.	<0.0005	0.002	0.005	0.003	0.002	31 mm Ø x 2 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		
BS 18150A	(0.0003)	0.0010	(0.0003)	.	.	(0.0008)	0.0045	0.0007	(0.0002)	38 mm Ø x ~7 or 19 mm	**17025**	last
BS 18150	(0.0004)	0.0009	(0.0002)	.	.	(0.0006)	0.0037	0.0007	(0.0001)	38 mm Ø x ~7 or 19+ mm	**17025**	
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 CT1~~	~~0.057~~	~~0.32~~	~~0.024~~	~~0.010~~	~~0.051~~	~~.~~	~~0.17~~	~~0.40~~	~~0.002~~	~~0.013~~	~~0.054~~	~~0.33~~	~~0.062~~	~~0.24~~	~~0.053~~	~~0.20~~
~~IMN CT2~~	~~0.042~~	~~0.22~~	~~0.033~~	~~0.013~~	~~0.033~~	~~.~~	~~0.10~~	~~0.29~~	~~0.059~~	~~0.086~~	~~0.036~~	~~0.24~~	~~0.041~~	~~0.14~~	~~0.036~~	~~0.19~~
~~IMN CT3~~	~~0.026~~	~~0.11~~	~~0.00093~~	~~0.0067~~	~~0.013~~	~~.~~	~~0.083~~	~~0.12~~	~~0.038~~	~~0.31~~	~~0.012~~	~~0.11~~	~~0.018~~	~~0.070~~	~~0.022~~	~~0.11~~
~~IMN CT4~~	~~0.016~~	~~0.050~~	~~0.0042~~	~~0.0043~~	~~0.011~~	~~.~~	~~0.046~~	~~0.049~~	~~0.020~~	~~0.88~~	~~0.0060~~	~~0.049~~	~~0.011~~	~~0.025~~	~~0.011~~	~~0.045~~
~~IMN CT5~~	~~0.0062~~	~~0.0056~~	~~(0.011)~~	~~0.0011~~	~~0.0061~~	~~.~~	~~0.016~~	~~0.0095~~	~~0.0059~~	~~(1.48)~~	~~0.0024~~	~~0.010~~	~~0.0069~~	~~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

availableindividually 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 GM5P	5.66	4.48	5.18	0.728	0.127	83.39	0.0497	0.055	0.0498	0.018	0.0298	Cd:0.0048	Te:0.0075	0.0507	0.0411	0.072	0.0310
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 71.31	4.27	4.38	6.44	2.07	0.098	82.30	0.052	0.045	0.11	0.027	last	<0.01	0.010	0.060	0.050	0.11	0.006
33X GM24A	3.67	3.85	3.35	0.0087	0.0083	88.88	0.0046	(0.0001)	0.0010	0.0009	.	(0.0013)	<0.0005	0.190	0.003	0.0012	0.0028
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 SET

available in set only 40 mm Ø x 25 mm

Number	Mg
~~IMN CCB-1~~	~~0.00405~~
~~IMN CCB-2~~	~~0.0339~~
~~IMN CCB-3~~	~~0.241~~
~~IMN CCB-4~~	~~0.509~~
~~IMN CCB-5~~	~~0.748~~

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	**BS 715B**	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	**BS 715C**	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	36X CN5P	31.03	.	.	.	0.0238	0.141	66.67	0.347	0.217	0.430	0.034	0.0120	0.088	0.689	0.0090	0.209
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	.	.	.	.	.	56.9	0.13	0.57	.	0.07	0.06	0.03	0.01	0.15	26.7
1	36X CN11A	14.96	.	1.457	.	0.0049	0.380	77.56	0.992	4.34	0.124	(0.002)	(0.003)	0.0012	0.083	(0.002)	(0.006)
	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
	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	
BS 715B	(0.001)	.	(0.0002)	0.0089	.	.	(0.001)	O:0.0020		(0.0002)	38 mm Ø x ~7 or 19+ mm	**17025, 17034**
BS 715C	(0.001)	.	(0.0002)	0.0081	.	(0.005)	(0.0014)	O:0.0020		(0.001)	38 mm Ø x ~7 or 19+ mm	**17025, 17034**
36X CN5P	.	0.0053	0.0035	(0.008)	.	0.0106	.	.	0.0203	.	~40 mm Ø x ~15 mm	
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	.	.	.	.	.	.	~40 mm Ø x ~17 mm	
C65.28	.	.	.	.	.	0.01	.	.	.	.	50 mm Ø x 10 - 12 mm	
36X CN11A	.	.	.	(0.001)	.	0.0241	.	.	.	.	40 mm Ø x ~17 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	**BS 706C**	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	
BS 706C	(0.001)	O:0.0016 N:(0.005)		(0.004)	.	(0.000003)	(0.0006)	.	(0.0000002)	38 mm Ø x ~7 or 19+ mm	**17025, 17034**
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?
IMN NC1	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
IMN NC2	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
IMN NC3	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
IMN NC4	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
IMN NC5	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	0.77	.	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	8.56	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	0.031	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 MB6	90.07	9.95	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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

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	last of stock
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	current batch
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	

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 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

BRASS

= class, where 1 = CRM and 2 = RM

CURM: cast 50 mm Ø x 10-12 mm
SRM: wrought 31 mm Ø x 19 mm

PB: 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
1	31X B2N	39.1	60.2	0.161	0.0154	0.0150	0.122	0.0361	0.102	0.053	0.0121	.	0.0129
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 TB4G	33.64	66.07	0.0041	0.0106	0.0058	0.0340	0.0013	0.0133	0.0246	0.0095	0.0203	0.0197
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	.	.
1	IMN MF6	.	63.36	0.014	.	0.00025	0.010	0.051	0.038	0.0023	0.00084	0.30	0.010

Number	Ag	B	C	Cd	Co	Cr	P	S	Se	Te	
31X B25C	0.0025	.	.	0.00019	.	(0.0002)	0.116	.	.	.	
31X B2N	0.0118	0.0029	.	0.0032	0.042	.	0.0191	.	.	0.0015	
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 TB4G	.	(0.0004)	.	0.0032	0.0067	.	.	.	.	0.0035	
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
IMN MF6	.	.	.	.	.	.	0.0012	.	.	.	40 mm Ø x ~30 mm

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 LH 6-1	6.09	18.98	63.18	.	.	(3.1)	4.54	3.19	0.25	.	0.20	0.257		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		50 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	40 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 WO2 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 WO1	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 WO2	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 WO3	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 WO4	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	0.010	0.0022	0.0042	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	3.02	<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)	.	.	.	50 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)	last	(<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 19 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	.	.	.	.	0.0005	.	.	.	.	.	wrought ~41 mm Ø x ~15 mm
31X 7835-4K	.	0.0020	.	.	0.0092	0.0051	.	.	.	.	.	chill cast ~40 mm Ø x ~15 mm
IMN WD-6	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm
31X CZ112A	0.0043	.	.	.	.	.	.	.	.	.	.	wrought ~41 mm Ø x ~15 mm

Number	Ag	B	Be	C	Cd	Cr	Mg	O	S	Se	Te	Units

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 MNB3F	2.11	25.57	66.41	1.41	1.25	0.377	0.509	1.642	0.423	0.044	0.036	0.056	0.044	99	.	97	360
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 31X NB: 42 mm Ø x ~15 mm BS: 38 mm Ø x see below CURM: 50 mm Ø x 10-12 mm IARM: 38 mm Ø x 3 or 19 mm

#	Number	Sn	Pb	Zn	Cu	Al	As	Bi	Fe	Mn	Ni	P	S	Sb	Si	Ag	B	Co
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	31X NB3J	1.38	0.127	24.46	72.86	0.130	0.0559	0.0786	0.071	0.124	0.0599	0.203	(0.004)	0.197	0.127	0.0464	.	.
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	.	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)	.	(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	O: 0.0013		~7 or 19mm
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	.	.	(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 SETS

nalysis listed in mass % except * which is mg/kg 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
available individually																		
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
available in SET ONLY																		
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
1 IARM 313A	3.09	21.3	75.4	(0.001)	0.011	(0.001)	(0.002)	0.09	0.042	0.014	0.006
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
IARM 313A	0.0017	0.0010	0.0008	(0.002)	(0.0003)	(0.004)	(0.001)	0.0016	(0.0004)	31 mm Ø x 2 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	B: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	0.00661	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 BO1	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 BO2	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 BO3	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 BO4	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 BO5	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
IMN BJ1	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
IMN BJ2	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
IMN BJ3	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
IMN BJ4	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
IMN BJ1	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
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
1	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	**BS 624**	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	**BS 642B**	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	**BS 642C**	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	**BS 642D**	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 Cu955-18	0.0019	.	(0.0080)	0.0027	.	.	(0.0012)	(0.0020)	.	31 mm Ø x 2 or 18 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	
BS 624	.	.	0.0041	.	.	(0.0005)	<0.005	<0.01	.	44 mm Ø x ~7 or 19+ mm	**17025, 17034**
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)	.	.	.	(<0.0005)	<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	
BS 642B	.	(<0.005)	0.0013	(<0.005)	(<0.0005)	(<0.0005)	(<0.0005)	0.0004	(<0.0005)	38 mm Ø x ~7 or 19 mm	**17025**
BS 642C	.	(<0.005)	(<0.005)	(<0.005)	(<0.005)	(<0.0005)	(<0.005)	(<0.0005)	(<0.0005)	38 mm Ø x ~7 or 19 mm	**17025**
C51.13	.	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm	
32X 61400A	0.0010	.	.	.	.	.	.	(0.0004)	.	~45 mm Ø x ~15 mm	
BS 642D	0.0011	.	0.0011	(0.0007)	(0.0005)	0.0007	(0.0003)	(0.001)	(0.0001)	38 mm Ø x ~7 or 19+ mm	**17025, 17034**
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	

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
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	**BS 630C**	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	**BS 630B**	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	CURM 52.54	7.85	81.59	.	<0.005	3.31	<0.005	1.20	5.40	.	0.086	0.022	0.135	0.39
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 | Al | Cu | As | Cr | Fe | Mg | Mn | Ni | P | Pb | Si | Sn | Zn |

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
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
BS 630C	.	(<0.0005)	.	0.0060	0.0019	(<0.0005)	0.0003	last	38 mm Ø x 19 mm **17025**
BS 630B	.	(<0.0005)	.	0.0067	0.0017	0.0013	(<0.0005)	.	38 mm Ø x ~7 or 19 mm+ **17025**
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
CURM 52.54	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm
32X ALB 13A	.	.	.	.	0.0011	.	.	(0.0007)	~35 mm Ø x ~15 mm

| Number | Ag | Be | Bi | C | Co | S | Sb | Se | Units |

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	.	.
Number	Al	Cu	Fe	Mn	Ni	Pb	Si	Sn	Zn	Bi	Cd	Cr	Mg

CRM BISMUTH BRONZE

Number	Bi	Cu	Ni	P	Pb	Sn	Zn	Al	Fe	O	S	Sb	Se	Units
IARM CuMB1-18	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 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	**BS 863B**	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
1	IARM 88C	2.99	5.79	2.98	0.147	22.86	64.5	(0.007)	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	**BS 675B**	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	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 BN5	0.0245	0.0298	rem	0.00731	2.69	0.0634	0.00612	0.0018	0.0314	0.00636	(0.00211)	11.82	0.0560
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	**BS 510C**	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	.	.
1	32X PB14E	0.128	9.65	0.103	89.70	0.0141	0.103	0.0354	0.0201	0.0235	0.0211	.	0.070	0.0433	(0.003)
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	**BS 510B**	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	0.01	<0.001	0.03	0.08	0.006
1	**BS 544B**	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	**BS 544C**	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	
BS 510C	(0.004)	.	(0.0010)	0.0008	<0.005	.	0.0006	.	38 mm Ø x ~7 or 19+ mm	**17025, 17034**
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	
32X PB14E	0.0152	0.146	.	0.0047	.	.	.	.	~40 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	
BS 510B	Zr: (0.0004)		0.0010	(0.0006)	(0.0008)	(0.0001)	0.0009	.	38 mm Ø x ~7 or 19+ mm	**17025**
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	
BS 544B	0.0173	.	0.0031	(0.0012)	(0.0007)	(0.0007)	0.0005	.	38 mm Ø x ~7 or 19+ mm	**17025**
32X PB17A	0.017	0.026	.	0.0018	(0.0004)	.	.	0.0022	~40 mm Ø x ~15 mm	
BS 544C	<0.005	.	0.0018	(0.0020)	<0.005	.	0.0006	.	38 mm Ø x ~7 or 19+ mm	**17025, 17034**
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	**BS 655B**	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	**BS 655C**	3.22	95.6	0.958	(<0.005)	0.0006	(<0.005)	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	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 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	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	
BS 655B	(<0.0005)	(<0.005)	(<0.0005)	(<0.0005)	(<0.0005)	0.0010	0.0002	(<0.0005)	38 mm Ø x ~7 or 19+ mm	**17025**
BS 655C	(<0.0005)	(<0.005)	(<0.005)	(<0.0005)	(<0.001)	0.0007	(<0.0005)	.	38 mm Ø x ~7, ~12 or 19+ mm	**17025**
IARM 82B	.	.	.	<0.0005	(0.001)	0.003	<0.01	.	31 mm Ø x 2 mm	last
37X 65500A	0.0014	.	.	.	.	0.0010	.	.	~38 mm Ø x ~15 mm	
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
IARM Cu647-18	.	.	(0.0086)	.	.	.	.	0.044	31 mm Ø x 2 or 18 mm	

CRM SILICON BRONZE SET

BH1 BH3 and BH6 set only, others ok individually 40 mm Ø x 25 mm

Number	Al	As	Bi	Cu	Fe	Mg	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn
IMN BH1	0.027	0.0047	0.018	Rem	1.67	0.0065	0.25	0.96	0.0047	0.74	0.012	0.066	4.77	0.044	2.03
IMN BH2	0.079	0.015	0.014	Rem	1.28	0.0066	0.54	0.74	0.023	0.57	0.0092	0.042	4.14	0.21	2.99
IMN BH3	0.14	0.022	0.0091	Rem	0.96	0.0075	1.00	0.53	0.039	0.40	0.0062	0.026	3.07	0.37	3.84
IMN BH4	0.22	0.054	0.006	Rem	0.55	0.0057	1.46	0.28	0.059	0.24	0.0064	0.016	2.29	0.55	4.91
IMN BH5	0.29	0.071	0.0019	Rem	0.093	0.0024	1.80	0.047	0.073	0.015	0.0055	0.0054	1.45	0.69	5.58
IMN BH6	0.32	0.078	0.018	Rem	0.35	0.01	0.80	0.39	0.078	0.017	0.016	0.056	1.51	0.32	6.27

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	**BS 937C**	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)
1	32X LB12E	9.63	8.64	0.459	79.76	0.0337	0.029	.	0.354	0.240	0.053	0.484	0.0099
2	HRT CU2017	9.24	8.91	0.37	80.11	.	0.011	.	1.25	0.007	0.026	0.14	.
1	**BS 929**	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	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	
BS 937C	(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	**17025**
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	
32X LB12E	0.0450	0.112	0.0338	.	.	0.061	.	.	.	0.0215	~40 mm Ø x ~15 mm	
HRT CU2017	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm	
BS 929	(<0.005)	0.0017	(<0.005)	(<0.005)	.	0.0031	(<0.005)	.	O:0.0031	.	51 mm Ø x ~7 or 19+ mm	**17025**
NCS HS45743	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm	
CURM 50.01	0.19	.	0.024	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm	

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	**BS 929MOD**	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	**BS 903E**	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
1	NCS HS45741	7.77	2.92	4.04	Rem	0.057	0.27	.	0.204	0.093	.	0.108	0.051
1	BAM 374	7.60	0.00083	0.00404	92.22	.	0.0040	0.00043	0.00327	0.1697	(0.0013)	(0.00063)	(<0.0010)
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	**BS 936**	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	**BS 932G**	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	**BS 932H**	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	**BS 836D**	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	**BS 836B**	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	**BS 836C**	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
BS 929MOD	.	0.0020	.	(0.003)	.	(0.0017)	.	O:0.0007	.	.	51 mm Ø x ~7 or 19+ mm **17025, 17034**
BS 903E	.	(0.002)	.	(0.002)	.	(0.002)	(0.0007)	N:(0.0004)	O:(0.007)		38 mm Ø x ~7 or 19+ mm **17025, 17034**
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 or 19+ mm last
NCS HS45741	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm
BAM 374	0.00121	(0.00043)	(0.00022)	.	.	.	.	.	(<0.0002)	.	40 mm Ø x 30 mm
BS 938-1	0.0048	(0.004)	.	.	.	.	.	.	.	.	38 mm Ø x 12 mm
BS 936	O:0.0026	0.0045	N:(0.0001)	(0.0025)	.	(0.003)	(0.00004)	.	.	Ti:(0.00006)	50 mm Ø x 19+ mm **17025**
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
IARM 91E	0.015	0.008	0.109	(0.003)	0.0011	0.0024	(0.0008)	.	0.004	.	31 mm Ø x 2 mm
BS 932G	.	0.0096	.	(0.011)	.	0.0025	(0.001)	.	O:0.0014	.	38 mm Ø x ~7 or 19+ mm **17025, 17034**
BS 932H	.	0.010	.	(0.007)	.	0.0028	.	O: 0.0016	.	.	38 mm Ø x ~7 or 19+ mm **17025, 17034**
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
BS 836D	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 **17025, 17034**
BS 836B	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 **17025, 17034**
BS 836C	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 **17025, 17034**
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 or 18 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

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	.	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
IMN BI1	0.181	0.138	0.120	.	**17034**	.	Rem	0.418	.	0.263	2.411	0.698	(6.97)	(0.025)	0.578	0.233	3.19	3.55
IMN BI2	(0.077)	(0.11)	0.0699	.	**17034**	.	Rem	0.308	.	0.146	1.457	0.585	(5.48)	(0.011)	0.432	0.129	4.18	5.73
IMN BI3	0.0344	0.0521	0.0284	.	**17034**	.	Rem	0.1669	.	0.0821	0.290	0.321	4.522	(0.0039)	0.235	0.0756	5.011	7.23
IMN BI4	(0.0021)	(0.0100)	0.00296	.	**17034**	.	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	**BS 110C**	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)	O: 0.0009	
145	**BS 14500**	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)	(<1ppm)	O: 0.0007	Te: 0.53
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	Cr: 0.0032	
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	**BS 630B**	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	Cr: 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	**BS 675B**	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	**BS 863B**	[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	Cr: 0.0042	
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	**BS 929**	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	O: 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	
CDA	Number	Cu	Al	Fe	Mn	Ni	Pb	Si	Sn	Zn	As	C	P	S	Sb	Be	Co		

ALLOY	ISO?	NUMBER
101		IARM Cu101-18
110	17034	BS 110C
110		IARM Cu110-18
110		IARM 70C
122.2		CURM 09.03
125		CURM 09.02
145	17025	BS 14500
145	17034	BS 14500A
172		BS 172Be-1
172	17034	BS 172Be-2
172		CTIF 4872
172		IARM Cu172-18
172		IARM Cu172-19
173		36X CBC4
175.1		36x CBC5
175.1	17034	BS 17510
180		36X 274
181.50	17025	BS 18150
181.50	17025	BS 18150A
181.55		36X CCR1
182		IARM Cu182-18
182		IARM Cu182-21
240		C30.07
260		C48.06
260		CURM 48.04
261.3		C48.03
274		C38.06
274		C38.06-1
280		C30.03
280		C30.12
314		IARM 72B
314		IARM Cu314-21
360	17025	BS 360B
360	17034	BS 360C
360	17034	BS 360D
360		IARM Cu360-18
360		SRM 1124
370		31X B18
371		C30.22
464		BS 464A
464	17034	BS 464B
464		IARM Cu464-21
482		BS 482A
482		IARM 75B
482		IARM 75C
485	17034	BS 485A
485		IARM 76D
485		IARM Cu485-18
486		IARM Cu486-18
510		32X 51000
510		BS 510A
510	17025	BS 510B
510	17034	BS 510C
510		IARM 77B
510		IARM Cu510-18
512		32X 92100
521		32X 52100
521		HRT CU2016
524		C11.04
544		33X 54400
544	17025	BS 544B
544	17034	BS 544C
544		IARM 78B
544		IARM Cu544-18
544 MOD	17025	BS 544c
610 MOD		31X B17
614		32X 61400
623		BS 623
623		BS 623A
623		IARM 79B
623		IARM 79C
624		32X ALB3
624	17034	BS 624
624		C52.51
624		CTIF 3011-G
624		CTIF CA21
630	17025	BS 630B
630	17025	BS 630C
630		IARM 80D
632		CTIF CA26
642	17025	BS 642B
642	17025	BS 642C
642	17034	BS 642D
642		IARM 81B
642		IARM Cu648-18
647		IARM Cu647-18
655		37X 65500
655		BS 655A
655	17025	BS 655B
655	17025	BS 655C
655		IARM 82B
655		IARM Cu655-18
656.8		HRT Cu2021
675		BS 675
675		BS 675A
675	17025	BS 675B
675		IARM 83B
687		BAM 368
693		ERM-EB393A
693		IARM 313A
702.6		37X 218
706		36X 70600A
706		BS 706
706		BS 706A
706		BS 706B
706	17034	BS 706C
706		CTIF CuNi 10
706		IARM 84C
706		HRT CU2014
713		BAM 389
715		36X 71500
715		BS 715A
715	17034	BS 715B
715	17034	BS 715C
715		IARM Cu715-18
715		IARM Cu715-20
715		SRM 1276a
767		C65.28
798.3		34X 79830
815		IARM 158C
836	17034	BS 836B
836	17034	BS 836C
836	17034	BS 836D
836		IARM Cu836-18
836 + Al		IMN BR1
838		33X GM8
844		IARM Cu844-18
855		31X B2N
855		C38.01
855		C38.02
855		C38.03
855		C38.04
855		C38.05
857		BS 857B-1
857		BS 857B-2
857		BS 857B-3
857		BS 857B-4
862		CTIF LH7
863	17025	BS 863B
863		IARM 88C
873		31X WSB6
893.2, Magnolia B		IARM CuMB1-18
902		BAM 377
903		BS 903B
903	17034	BS 903E
903		IARM Cu903-18
905		BS 905A-1
905		BS 905A-2
905		BS 905A-3
905		BS 905A-4
907		IARM 310A
908		32X PB10
910 MOD		CTIF B1
922		BS 922B-1
922		BS 922B-2
922		BS 922B-4
922		BS 922B-5
927.1		32X SN1
929	17025	BS 929
929 MOD	17034	BS 929MOD
931 MOD		C71.34
932	17034	BS 932G
932	17034	BS 932H
932		IARM 91E
932		IARM Cu932-18
932 MOD		CTIF B23
936	17025	BS 936
936		CTIF B31
937		32X 93700
937	17025	BS 937C
937		CURM 50.02
937		IARM 92C
938		BS 938-1
941		IARM 184A
945 MOD		CTIF B32
947		IARM 267A
952.2		CTIF 2152-S
953		CTIF CA3
954		BS 954B
954		BS 954C
954		BS CC954
954		IARM Cu954-18
954		IARM Cu954-19
954		IARM Cu954-21
955		BS 955C
955		IARM Cu955-18
955 MOD		CTIF CA10
955.1		IARM 334A
955.1		IARM 334B
955.1 MOD		CTIF CA22
956		32X CA12
976		IARM 298A
Coinage Alloy		36X CN21
Coinage Alloy		36X CN23
Cu IX		SRM C1252a
Cu VIII		SRM C1251a
Cu X		SRM C1253a
CuSn5Zn5Pb2		HRT CU2022
Envirobrass 2-1		IARM 226A
Envirobrass 2-2		IARM 227A
Envirobrass 2-3		IARM 228A
Federalloy I-836		IARM 265A
Federalloy I-844		IARM 264A
Federalloy I-848A		IARM 263A
Federalloy III-932		IARM 266A
Hiduron 130		IARM CuH130-18
Hiduron 191		IARM CuH191-18
NARloy-A		IARM 159A
NARloy-Z		IARM 160A
Spinodal Alloy		36X SP1
Spinodal Alloy		36X SP2

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	.	.	.	.	.	0.001-0.005	.	.	.	.	.	.	.	.	.	.	.	.	.	.
104	Cu = Ag+Cu, O<0.0010	>99.95	>0.027	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
105	Cu = Ag+Cu, O<0.0010	>99.95	>0.034	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
107	Cu = Ag+Cu, O<0.0010	>99.95	>0.085	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
108	Cu = Ag+Cu+P	>99.95	.	.	.	.	.	0.005-0.012	.	.	.	.	.	.	.	.	.	.	.	.	.	.
109.1	Cu = Ag+Cu, O<0.005	>99.95	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
109.2	Cu = Ag+Cu, O<0.02	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
109.3	Cu = Ag+Cu, O<0.02	>99.90	>0.044	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	<0.0015	<0.0004	.	<0.0005	.	<0.0005	.	<0.00010	.	.	.	.	.
111	Cu = Ag+Cu	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
113	Cu = Ag+Cu	>99.90	>0.027	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
114	Cu = Ag+Cu	>99.90	>0.034	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
115	Cu = Ag+Cu	>99.90	>0.054	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
116	Cu = Ag+Cu	>99.90	>00.85	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
117	Cu = Cu+B, B 0.004-0.020	>99.90	.	.	.	.	.	<0.04	.	.	.	.	.	.	.	.	.	.	.	.	.	.
119.04	Cu = Ag+Cu	>99.90	>0.027	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
119.05	Cu = Ag+Cu	>99.90	>0.034	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
119.06	Cu = Ag+Cu	>99.90	>0.054	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
119.07	Cu = Ag+Cu	>99.90	>0.085	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
120	Cu = Ag+Cu	>99.90	.	.	.	.	.	0.004-0.012	.	.	.	.	.	.	.	.	.	.	.	.	.	.
121	Cu = Ag+Cu	>99.90	>0.014	.	.	.	.	0.005-0.012	.	.	.	.	.	.	.	.	.	.	.	.	.	.
122	Cu = Ag+Cu	>99.90	.	.	.	.	.	0.015-0.040	.	.	.	.	.	.	.	.	.	.	.	.	.	.
122.1	Cu = Ag+Cu	>99.90	.	.	.	.	.	0.015-0.025	.	.	.	.	.	.	.	.	.	.	.	.	.	.
122.2	Cu = Ag+Cu	>99.90	.	.	.	.	.	0.040-0.065	.	.	.	.	.	.	.	.	.	.	.	.	.	.
123	Cu = Ag+Cu	>99.90	.	.	.	.	.	0.015-0.040	.	.	.	.	.	.	.	.	.	.	.	.	.	.
125	Cu=Ag+Cu, Te+Se <0.025	>99.88	.	.	.	.	<0.050	.	<0.004	.	<0.003	.	.	.	<0.012	.	<0.003	.	.	.	.	.
125.1	Cu=Ag+Cu, Te+Se <0.025	>99.90	.	.	<0.05	.	<0.050	>0.03	<0.020	.	<0.003	.	<0.05	<0.080	.	.	<0.005	.	.	.	.	.
127	Cu=Ag+Cu, Te+Se <0.025	>99.98	>0.027	.	.	.	<0.050	.	<0.004	.	<0.003	.	.	.	<0.012	.	<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, Te+Se <0.025	>99.88	>0.034	.	.	.	<0.050	.	<0.004	.	<0.003	.	.	.	<0.012	.	<0.003	.	.	.	.	.
129	Cu=Ag+Cu, Te+Se <0.025	>99.88	>0.054	.	.	.	<0.050	.	<0.004	.	<0.003	.	.	.	<0.012	.	<0.003	.	.	.	.	.
130	Cu=Ag+Cu, Te+Se <0.025	>99.88	>0.085	.	.	.	<0.050	.	<0.004	.	<0.003	.	.	.	<0.012	.	<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	.	.	.	.	.	.	.	.	.	.	.	.	.
141.81	Cu=Ag+Cu, C<0.005, Cd<0.002	>99.90	.	.	.	.	.	<0.002	<0.002	.	.	.	.	<0.002	.	.	.	.	.	.	.	.
142	Cu = Ag+Cu	>99.40	.	.	.	.	.	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	.	.	<0.003	.	0.10-0.20	<0.05	.	.	.	.	.	.	.	.
144.1	Cu = Ag+Cu+Sn	>99.90	.	.	<0.05	.	.	0.005-0.020	<0.05	.	.	.	0.10-0.20	.	.	.	.	.	.	.	.	.
144.15	Cu = Ag+Cu+Sn	>99.96	.	.	.	.	.	.	.	.	.	.	0.10-0.15	.	.	.	.	.	.	.	.	.
144.2	Cu=Ag+Cu+Sn+Te Te+Se 0.02-0.05	>99.90	.	.	.	.	.	.	.	.	.	.	0.05-0.15	.	.	.	.	.	.	.	.	.
144.3	Cu = Ag+Cu	>99.90	.	.	.	.	.	.	.	.	.	.	0.25-0.35	.	.	.	.	.	.	.	.	.
144.4	Cu = Ag+Cu+Sn	>99.96	.	.	.	.	.	.	.	.	.	.	0.005-0.010	.	.	.	.	.	.	.	.	.
145	Cu = Ag+Cu+Te, Te 0.40-0.70	>99.90	.	.	.	.	.	0.004-0.012	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	.	.	.	.	.	0.001-0.005	.	.	.	.	0.003-0.22	.	.	.	.	.	.	.	.	.
147	Cu = Ag+Cu+P+S	>99.90	.	.	.	.	.	0.002-0.005	.	0.20-0.50	.	.	.	.	.	.	.	.	.	.	.	.
147.1	Cu = Ag+Cu+P+Pb+S	>99.90	.	.	.	.	.	0.010-0.030	<0.05	0.05-0.15	.	.	.	.	.	.	.	.	.	.	.	.
147.2	Cu = Ag+Cu+P+Pb+S	>99.50	.	.	.	.	.	0.10-0.03	<0.10	0.20-0.50	.	.	.	.	.	.	.	.	.	.	.	.
147.3		>99.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
150	Cu = Ag+Cu	>99.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.10-0.20
151	Cu = Ag+Cu	>99.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.05-0.15
151.5	Cu = Ag+Cu+Zn	>99.96	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.015-0.03
155	Cu = Ag+Cu	>99.75	0.027-0.10	.	.	.	.	0.040-0.080	.	.	.	.	.	.	.	.	.	.	.	0.08-0.13	.	.
156	Cu = Ag+Cu	>99.60	.	.	.	.	.	0.06-0.09	.	.	.	.	.	.	.	.	.	0.20-0.30	.	<0.02	.	.
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	>99.62	.	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	>99.52	.	0.18-0.22	<0.01	.	.	.	<0.01	.	.	.	.	.	.	.	.	.	.	.	.	.
157.25	Cu = Ag+Cu, O 0.20-0.28	>99.43	.	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	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
164	Cu = Tot.All, Cd 0.60-0.90	>99.80	.	.	<0.02	.	.	.	.	.	.	.	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	.	.	.	1.60-1.79	.	.	.	.	.	.
172	Cu = Ag+Cu Ni+Co >0.20	rem	.	<0.20	.	.	.	.	.	.	.	<0.20	.	.	.	1.80-2.00	.	.	.	.	.	.
173	Cu = Ag+Cu Ni+Co >0.20	rem	.	<0.20	.	.	.	.	0.20-0.60	.	.	<0.20	.	.	.	1.80-2.00	.	.	.	.	.	.
174	Cu = Ag+Cu	rem	.	<0.20	<0.20	.	.	.	.	.	.	<0.20	.	.	.	0.15-0.50	.	0.15-0.50	.	.	.	.
174.1	Cu = Ag+Cu	rem	.	<0.20	<0.20	.	.	.	.	.	.	<0.20	.	.	.	0.05-0.50	.	0.35-0.60	.	.	.	.
174.2	Cu = Ag+Cu	rem	.	<0.20	<0.20	.	.	.	.	.	.	<0.20	.	.	.	0.05-0.50	.	0.05-0.60	.	.	.	.
174.5	Cu = Ag+Cu	rem	.	<0.20	<0.20	.	0.50-1.00	.	.	.	.	.	<0.25	.	.	0.15-0.50	.	.	.	.	.	<0.50
174.55	Cu = Ag+Cu	rem	.	<0.20	<0.20	.	0.50-1.00	.	0.20-0.60	.	.	.	<0.25	.	.	0.15-0.50	.	.	.	.	.	<0.50
174.6	Cu = Ag+Cu	rem	.	<0.20	<0.20	.	1.0-1.4	.	.	.	.	.	<0.25	.	.	0.15-0.50	.	.	.	.	.	<0.50
174.65	Cu = Ag+Cu	rem	.	<0.20	<0.20	.	.	.	.	.	.	<0.20	<0.25	.	.	0.15-0.50	.	.	.	.	.	<0.50
175	Cu = Ag+Cu	rem	.	.	<0.10	.	.	.	.	.	.	.	.	.	.	0.40-0.70	.	2.4-2.7	.	.	.	.
175.1	Cu = Ag+Cu	rem	.	<0.20	<0.10	.	1.4-2.2	.	.	.	.	.	.	.	.	0.20-0.60	.	.	.	.	.	.
175.2	Cu = Ag+Cu	rem	.	.	.	.	0.50-1.50	.	.	.	.	.	.	.	.	0.10-0.30	.	.	0.03-0.06	.	.	0.10-0.30
175.3	Cu = Ag+Cu Ni = Ni+Co	rem	.	<0.6	<0.20	.	1.8-2.5	.	.	.	.	<0.20	.	.	.	0.20-0.40	.	.	.	.	.	.
176	Cu = Ag+Cu	rem	0.90-1.10	<0.20	<0.10	.	.	.	.	.	.	<0.20	.	.	.	0.25-0.50	.	1.4-1.7	.	.	.	.
177	Cu = Ag+Cu, Te 0.40-0.60	rem	.	<0.20	<0.10	.	.	.	.	.	.	<0.20	.	.	.	0.40-0.70	.	2.4-2.7	.	.	.	.
180	Cu = Ag+Cu Ni = Ni+Co	rem	.	.	<0.15	.	2.0-3.0	.	.	.	.	0.40-0.80	.	.	.	.	.	.	0.10-0.60	.	.	.
180.3	Cu = Ag+Cu	>99.90	.	.	.	.	.	0.005-0.150	.	.	.	.	0.08-0.12	.	.	.	.	.	0.10-0.20	.	.	.
180.4	Cu = Ag+Cu	>99.90	.	.	.	.	.	.	.	.	.	.	0.20-0.30	0.05-0.15	.	.	.	.	0.25-0.35	.	.	.
180.45	Cu = Ag+Cu	>99.10	.	.	.	.	.	.	.	.	.	<0.05	0.20-0.30	0.15-0.30	.	.	.	.	0.20-0.35	.	.	.
180.5	Cu = Ag+Cu, Te 0.005-0.015	>99.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.05-0.15	.	.	.
180.7	Cu = Ag+Cu	>99.00	.	.	.	.	.	.	.	.	.	0.02-0.07	.	.	.	.	.	.	0.15-0.40	.	0.01-0.40	.
180.8	Cu = Ag+Cu	rem	0.01-0.30	.	0.02-0.20	.	.	.	.	.	.	0.01-0.10	.	.	.	.	.	.	0.20-0.70	.	0.01-0.15	.
180.9	Cu = Ag+Cu	>96.00	.	.	.	.	0.30-1.20	.	.	.	.	.	0.50-1.20	.	.	.	.	.	0.30-1.00	.	0.15-0.80	.
181	Cu = Ag+Cu	>98.70	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.4-1.0	0.03-0.06	.	0.08-0.20
181.35	Cu = Ag+Cu, Cd 0.20-0.60	rem	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.20-0.60	.	.	.
181.4	Cu = Ag+Cu	rem	.	.	.	.	.	.	.	.	.	0.005-0.05	.	.	.	.	.	.	0.15-0.45	.	.	0.05-0.25
181.45	Cu = Ag+Cu	rem	.	.	.	.	.	.	.	.	.	.	.	0.10-0.30	.	.	.	.	0.10-0.30	.	.	0.05-0.15
181.5	Cu = Ag+Cu	rem	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.50-1.50	.	.	0.02-0.20

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
181.55	Cu = Ag+Cu	rem	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.50-1.5	.	.	0.05-0.25
182	Cu = Ag+Cu	rem	.	.	<0.10	.	.	.	<0.05	.	.	<0.10	.	.	.	.	.	.	0.6-1.2	.	.	.
184	Cu=Ag+Cu Ca<0.005 Li <0.05	rem	.	.	<0.15	.	.	<0.05	.	.	.	<0.10	.	<0.70	<0.005	.	.	.	0.40-1.20	.	.	.
185	Cu = Ag+Cu	rem	0.08-0.12	.	.	.	.	<0.04	<0.015	.	.	.	.	.	.	.	.	.	0.40-1.00	.	.	.
185.5	Cu = Ag+Cu	rem	.	.	.	.	.	.	.	.	.	.	0.10-0.14	.	.	.	.	.	0.6-1.0	.	.	.
186	Cu = Ag+Cu	rem	.	.	0.25-0.80	.	<0.25	.	.	.	.	.	.	.	.	.	.	<0.10	0.10-1.0	.	0.05-0.50	0.05-0.40
186.1	Cu = Ag+Cu	rem	.	.	<0.10	.	<0.25	.	.	.	.	.	.	.	.	.	.	0.25-0.80	0.10-1.0	.	0.05-0.50	0.05-0.40
186.65	Cu = Ag+Cu	>99.00	.	.	.	.	.	0.02-0.04	.	.	.	.	.	.	.	.	.	.	.	0.40-0.90	.	.
187	Cu = Ag+Cu	rem	.	.	.	.	.	.	0.8-1.5	.	.	.	.	.	.	.	.	.	.	.	.	.
188.35	Cu = Ag+Cu	>99.00	.	.	<0.10	.	.	<0.01	<0.05	.	.	.	0.15-0.55	<0.30	.	.	.	.	.	.	.	.
189	Cu = Ag+Cu	rem	.	<0.01	.	0.10-0.30	.	<0.05	<0.02	.	.	0.15-0.40	0.6-0.9	<0.10	.	.	.	.	.	.	.	.
189.8	Cu = Ag+Cu	>98.00	.	.	.	<0.50	.	<0.15	<0.02	.	.	<0.50	<1.00	.	.	.	.	.	.	.	.	.
189.9	Cu = Ag+Cu	rem	.	.	.	.	.	0.005-0.015	.	.	.	.	1.8-2.2	.	.	.	.	.	0.10-0.20	.	.	.
190	Cu = Ag+Cu	rem	.	.	<0.10	.	0.9-1.3	0.15-0.35	<0.05	.	.	.	.	<0.80	.	.	.	.	.	.	.	.
190.1	Cu = Ag+Cu	rem	.	.	.	.	0.8-1.8	0.01-0.05	.	.	.	0.15-0.35	.	.	.	.	.	.	.	.	.	.
190.15	Cu = Ag+Cu	rem	.	.	.	.	0.50-2.40	0.02-0.20	.	.	.	0.10-0.40	.	.	.	.	.	.	.	0.02-0.15	.	.
190.2	Cu = Ag+Cu Mn+Si <0.35	rem	.	.	.	.	0.50-3.00	0.01-0.20	.	.	.	.	0.30-0.90	.	.	.	.	.	.	.	.	.
190.25		rem	.	.	<0.10	.	0.8-1.2	0.03-0.07	.	.	.	.	0.7-1.1	<0.20	.	.	.	.	.	.	.	.
190.3	Cu = Ag+Cu	rem	.	.	<0.10	.	1.5-2.0	0.01-0.03	<0.02	.	.	.	1.0-1.5	.	.	.	.	.	.	.	.	.
191	Cu = Ag+Cu, Te 0.35-0.60	rem	.	.	<0.20	.	0.9-1.3	0.15-0.35	<0.10	.	.	.	.	<0.50	.	.	.	.	.	.	.	.
191.4	Cu = Ag+Cu	rem	.	.	<0.05	.	0.8-1.2	0.15-0.35	0.40-0.80	.	.	.	<0.05	<0.50	.	.	.	.	.	.	.	.
191.6	Cu = Ag+Cu	rem	.	.	<0.05	.	0.8-1.2	0.15-0.35	0.8-1.2	.	.	.	<0.05	<0.50	.	.	.	.	.	.	.	.
192		>98.70	.	.	0.8-1.2	.	.	0.01-0.04	.	.	.	.	.	<0.20	.	.	.	.	.	.	.	.
192.1		rem	.	.	0.05-0.15	.	.	0.025-0.040	.	.	.	.	.	.	.	.	.	.	.	.	.	.
192.15		rem	.	.	0.05-0.20	.	.	0.025-0.500	<0.20	.	.	.	.	1.1-3.5	.	.	.	.	.	.	.	.
192.2	B 0.005-0.015	rem	.	.	0.10-0.30	.	0.10-0.25	0.03-0.07	.	.	.	.	0.05-0.10	.	.	.	.	.	.	.	.	.
192.5	B 0.005-0.025	rem	.	.	0.05-0.40	.	0.05-0.40	0.03-0.10	.	.	.	.	0.05-0.20	.	.	.	.	.	.	.	.	.
192.6		>98.50	.	.	0.40-0.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.02-0.15	0.20-0.40	.
192.8		rem	.	.	0.50-1.50	.	.	0.005-0.015	.	.	.	.	0.30-0.70	0.30-0.70	.	.	.	.	.	.	.	.
194		>97.00	.	.	2.1-2.6	.	.	0.015-0.15	<0.03	.	.	.	.	0.05-0.20	.	.	.	.	.	.	.	.
194.1		rem	.	.	1.8-2.3	.	.	0.015-0.050	.	.	.	.	0.6-0.9	.	.	.	.	.	.	.	.	.
194.5		rem	.	.	1.5-3.0	.	.	0.005-0.050	.	.	.	.	0.8-2.5	.	.	.	.	.	.	.	.	.
195		>96.00	.	<0.02	1.0-2.0	.	.	0.01-0.35	<0.02	.	.	.	0.10-1.00	<0.20	.	.	.	0.30-1.30	.	.	.	.
195.2		>96.60	.	.	0.50-1.50	.	.	0.01-0.35	.	.	.	.	0.50-1.50	.	.	.	.	.	.	.	.	.
196		rem	.	.	0.9-1.2	.	.	0.25-0.35	.	.	.	.	.	<0.35	.	.	.	.	.	.	.	.

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
197		rem	.	.	0.30-1.20	<0.05	<0.05	0.10-0.40	<0.05	.	.	.	<0.02	<0.20	.	.	.	<0.05	.	0.01-0.20	.	.
197.1	Ni+Co <0.10	rem	.	.	0.05-0.40	<0.05	<0.10	0.07-0.15	<0.05	.	.	.	<0.20	<0.20	.	.	.	.	.	0.03-0.06	.	.
197.2	Ni+Co <0.10	rem	.	.	0.05-0.50	<0.05	<0.10	0.05-0.15	<0.05	.	.	.	<0.20	<0.20	.	.	.	.	.	0.06-0.20	.	.
197.5		rem	.	.	0.35-1.20	<0.05	<0.05	0.10-0.40	<0.05	.	.	.	0.05-0.40	<0.20	.	.	.	<0.05	.	0.01-0.20	.	.
198		rem	.	.	0.02-0.50	.	.	0.01-0.10	.	.	.	.	0.10-1.00	0.30-1.50	.	.	.	.	.	0.10-1.00	.	.
198.1		rem	.	.	1.5-3.0	.	.	<0.10	.	.	.	.	.	1.0-5.0	.	.	.	.	<0.10	<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	<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		68.0-72.0	.	<0.10	.	.	.	.	<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	<0.03	.	.	.	<0.05	rem	.	.	.	.	.	.	.	.
285.8		49.0-52.0	.	<0.10	<0.10	.	.	.	<0.50	.	.	.	.	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	0.04-0.10	1.3-2.5	.	.	.	.	rem	.	.	.	.	.	.	.	.

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
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	.	.	.	.	.	.	0.30-0.70	.	.	.	.	rem	0.02-0.06	.	.	.	.	.	.	.
330		65.0-68.0	.	.	<0.07	.	.	.	0.25-0.70	.	.	.	.	rem	.	.	.	.	.	.	.	.
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	.	.	.	.	.	.	1.5-3.5	.	.	.	.	rem	0.02-0.25	.	.	.	.	.	.	.
353.4		60.0-63.0	.	.	0.10-0.30	.	.	.	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	.	<0.25	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	.	.	.	.	.	.	.	.

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
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	.	<0.02	.	.	rem	.	.	.	.	.	.	.	.
404		rem	.	.	.	.	.	.	.	.	.	.	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	.	.	.	.	0.10-0.50	<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	.	.	0.01-0.05	.	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	.	.	.	<0.05	.	.	.	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	.	.	.	4.8-5.5	rem	.	.	.	.	.	.	.	.
420		88.0-91.0	.	.	.	.	.	<0.25	.	.	.	.	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		88.0-91.0	.	.	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	Ni = Ni+Co	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	0.02-0.06	.	.	.	.	.	.	.
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	.	.	0.02-0.10	<0.07	.	.	.	0.8-1.2	rem	.	.	.	.	.	.	.	.
454.5		65.0-66.0	.	0.20-0.40	.	.	.	0.10-0.30	.	.	.	.	0.10-0.30	rem	.	.	.	.	.	.	.	.

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
462		62.0-65.0	.	.	<0.10	.	.	.	<0.20	.	.	.	0.50-1.00	rem	.	.	.	.	.	.	.	.
462.1		61.0-64.0	.	<0.03	.	.	.	.	<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	0.02-0.06	.	.	.	.	.	.	.
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	.	.	.	.	<0.05	.	.	.	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	.	.	.	1.3-2.2	.	.	.	0.50-1.00	rem	.	.	.	.	.	.	.	.
485.1		59.0-62.0	.	.	.	.	.	.	1.0-2.5	.	.	.	0.7-1.5	rem	0.02-0.25	.	.	.	.	.	.	.
486		59.0-62.0	.	.	.	.	.	.	1.0-2.5	.	.	.	0.8-1.5	rem	0.02-0.25	.	.	.	.	.	.	.
490.8		49.0-52.0	.	<0.10	.	.	.	.	<0.50	.	.	.	3.0-4.0	rem	.	.	.	.	.	.	.	.
501		rem	.	.	<0.05	.	.	0.01-0.05	<0.05	.	.	.	0.50-0.80	.	.	.	.	.	.	.	.	.
502		rem	.	.	<0.10	.	.	<0.04	<0.05	.	.	.	1.0-1.5	.	.	.	.	.	.	.	.	.
505		rem	.	.	<0.10	.	.	0.03-0.35	<0.05	.	.	.	1.0-1.7	<0.30	.	.	.	.	.	.	.	.
505.1		rem	.	.	.	.	0.15-0.40	0.02-0.07	.	.	.	.	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	.	.	.	.	.	.	.	.	.
507.05		>96.50	.	.	0.10-0.40	.	.	0.04-0.15	<0.02	.	.	.	1.5-2.0	<0.50	.	.	.	.	.	.	.	.
507.1		rem	.	.	.	.	0.10-0.40	<0.15	.	.	.	.	1.7-2.3	.	.	.	.	.	.	.	.	.
507.15		rem	.	.	0.05-0.15	.	.	0.025-0.040	<0.02	.	.	.	1.7-2.3	.	.	.	.	.	.	.	.	.
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	.	.	.	.	.	.	.	.	.
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	.	.	.	.	<0.15	.	.	.	.

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	.	.	.	0.10-0.35	<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	.	0.05-0.20	0.02-0.10	<0.05	.	.	.	5.5-7.0	<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	.	0.05-0.20	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	.	0.05-0.20	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	2.5-4.0	.	.	.	4.0-5.5	<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+ P+Pb+Sn+Zn >99.5	.	.	.	<0.10	.	.	<0.50	3.5-4.5	.	.	.	3.5-4.5	1.5-4.5	.	.	.	.	.	.	.	.
548	Cu+ P+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	.	.	.	.	5.8-6.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	.	.	<0.10	.	<0.20	.	.	.	.	.	.	.	.
613		rem	.	6.0-7.5	2.0-3.0	<0.20	<0.15	<0.015	<0.01	.	.	<0.10	0.20-0.50	<0.10	.	.	.	.	.	.	.	.
614		rem	.	6.0-8.0	1.5-3.5	<1.00	.	<0.015	<0.01	.	.	.	.	<0.20	.	.	.	.	.	.	.	.
615	Cu = Ag+Cu	rem	.	7.7-8.3	.	.	1.8-2.2	.	<0.015	.	.	.	.	.	.	.	.	.	.	.	.	.
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	.	.	.	<0.60	<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	.	.	.	.	<0.25	<0.60	.	.	.	.	.	.	.	.	.

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
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	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	<0.10	<0.40	.	.	.	.	.	<0.05	.	.
630	Cu = Ag+Cu	rem	.	9.0-11.0	2.0-4.0	<1.50	4.0-5.5	.	.	.	.	<0.25	<0.20	<0.30	.	.	.	.	.	.	.	.
630.1	Cu = Ag+Cu	>78.00	.	9.7-10.9	2.0-3.5	<1.50	4.5-5.5	.	.	.	.	.	<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	.	.	<0.15	<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	.	.	.	.	.	.	.	.	.	.
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	.	.	.	.	.	.	.	.	.	.
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	.	.	.	.	.	.	.	.	.	.
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	.	.	.	.	.	.	.	.	.	.
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	<0.50	<0.15	.	.	.	.	.	.	.
636	Cu = Ag+Cu	rem	.	3.0-4.0	<0.15	.	<0.15	.	<0.05	.	.	0.7-1.3	<0.20	<0.50	<0.15	.	.	.	.	.	.	.
638	Cu = Ag+Cu	rem	.	2.5-3.1	<0.20	<0.10	<0.20	.	<0.05	.	.	1.5-2.1	.	<0.80	.	.	.	0.25-0.55	.	.	.	.
641.1	Cu = Ag+Cu	rem	.	8.0-11.0	.	<0.50	.	.	1.0-2.0	.	.	.	.	.	.	.	.	.	.	.	.	.
642	Cu = Ag+Cu	rem	.	6.3-7.6	<0.30	<0.10	<0.25	.	<0.05	.	.	1.5-2.2	<0.20	<0.50	<0.015	.	.	.	.	.	.	.
642.1	Cu = Ag+Cu	rem	.	6.3-7.0	<0.30	<0.10	<0.25	.	<0.05	.	.	1.5-2.0	<0.20	<0.50	<0.15	.	.	.	.	.	.	.
642.5	Cu = Ag+Cu	rem	.	5.5-7.5	<1.00	<0.50	.	.	.	.	.	1.5-3.0	.	.	.	.	.	.	.	.	.	.
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	>95.00	.	.	.	<0.10	2.9-3.5	.	.	.	.	0.50-0.90	.	0.20-0.50	.	.	.	.	.	.	.	.
647.2	Cu = Ag+Cu	rem	.	.	.	.	1.6-2.2	.	.	.	.	0.35-0.60	.	0.10-0.40	.	.	.	.	.	0.01-0.03	.	.
647.25	Cu = Ag+Cu Ca <0.01	>95.00	.	.	<0.25	.	1.3-2.7	.	<0.01	.	.	0.20-0.80	0.20-0.80	0.50-1.50	.	.	.	.	<0.20	<0.20	.	.
647.3	Cu = Ag+Cu	>93.50	.	.	.	<0.10	2.9-3.5	.	.	.	.	0.50-0.90	1.0-1.5	0.20-0.50	.	.	.	.	.	.	.	.
647.4	Cu = Ag+Cu Ca <0.01	>95.00	.	.	.	.	1.0-2.0	.	<0.01	.	.	0.05-0.50	1.5-2.5	0.20-1.00	.	.	.	.	.	<0.05	.	.
647.5	Cu = Ag+Cu	rem	.	.	<1.00	.	1.0-3.0	<0.10	.	.	.	0.10-0.70	0.05-0.80	<1.00	.	.	.	.	.	<0.10	.	<0.10
647.6	Cu = Ag+Cu	>93.50	.	.	0.10-0.40	.	0.40-2.50	.	<0.02	.	.	0.05-0.60	<0.30	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	<0.01	<0.01	<0.01
649	Cu = Ag+Cu	rem	.	<0.10	<0.10	.	<0.10	.	<0.05	.	.	0.8-1.2	1.2-1.6	<0.20	.	.	.	.	.	.	.	.
651	Cu = Ag+Cu	rem	.	.	<0.80	<0.70	.	.	<0.05	.	.	0.8-2.0	.	<1.50	.	.	.	.	.	.	.	.
653	Cu = Ag+Cu	rem	.	.	<0.80	.	.	.	<0.05	.	.	2.0-2.6	.	.	.	.	.	.	.	.	.	.
654	Cu = Ag+Cu	rem	.	.	.	.	.	.	<0.05	.	.	2.7-3.4	1.2-1.9	<0.50	.	.	.	.	0.01-0.12	.	.	.
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
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	.	.	2.8-4.0	<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	.	.	.	.	.	.	.	.	.	.
661	Cu = Ag+Cu	rem	.	.	<0.25	<1.50	.	.	0.20-0.80	.	.	2.8-3.5	.	<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 Fe+Co 1.4-2.4	84.5-87.5	.	.	.	.	.	<0.35	<0.05	.	.	.	1.5-3.0	rem	.	.	.	<0.20	.	.	.	.
664	Cu = Ag+Cu Fe+Co 1.8-2.3	rem	.	.	1.3-1.7	.	<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	1.8-2.3	.	<0.05	<0.02	<0.015	.	.	<0.05	<0.05	11.0-12.0	<0.05	.	.	.	.	.	.	.
664.2	Cu = Ag+Cu	rem	.	.	0.50-1.50	.	.	.	.	.	.	.	.	12.7-17.0	.	.	.	.	.	.	.	.
667	Cu = Ag+Cu	68.5-71.5	.	.	<0.10	0.8-1.5	.	.	<0.07	.	.	.	.	rem	.	.	.	.	.	.	.	.
668	Cu = Ag+Cu	60.0-63.0	.	<0.25	<0.35	2.0-3.5	<0.25	.	<0.50	.	.	0.50-1.50	<0.30	rem	.	.	.	.	.	.	.	.
669	Cu = Ag+Cu	62.5-64.5	.	.	<0.25	11.5-12.5	.	.	<0.05	.	.	.	.	rem	.	.	.	.	.	.	.	.
669.5	Cu = Ag+Cu	rem	.	1.0-1.5	<0.50	14.0-15.0	.	.	<0.01	.	.	.	.	14.0-15.0	.	.	.	.	.	.	.	.
670	Cu = Ag+Cu	63.0-68.0	.	3.0-6.0	2.0-4.0	2.5-5.0	.	.	<0.20	.	.	.	<0.50	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	.	.	0.50-1.50	<0.30	rem	.	.	.	.	.	.	.	.
674	Cu = Ag+Cu	57.0-60.0	.	0.50-2.00	<0.35	2.0-3.5	<0.25	.	<0.50	.	.	0.50-1.50	<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	.	.	0.7-1.3	<0.50	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	.	.	0.25-0.70	<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	.	.	0.50-1.50	.	.	.	.	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	.	.	.	.	rem	0.04-0.80	.	.	.	.	.	.	.
678	Cu = Ag+Cu	56.0-59.0	.	0.50-1.50	0.7-1.5	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	.	.	<0.60	<0.50	rem	.	.	.	.	.	.	.	.
678.2	Cu = Ag+Cu	56.5-59.5	.	0.30-1.30	0.50-1.20	0.30-2.00	.	.	<0.10	.	.	.	0.30-1.00	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	.	.	0.04-0.15	0.75-1.10	rem	.	.	.	.	.	.	.	.
681	Cu = Ag+Cu	56.0-60.0	.	<0.01	0.25-1.25	0.01-0.50	.	.	<0.05	.	.	0.04-0.15	0.75-1.10	rem	.	.	.	.	.	.	.	.
682	Cu = Ag+Cu	58.0-60.0	.	.	0.6-1.0	0.6-1.0	.	.	.	.	.	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	.	.	.	.	rem	0.02-0.06	.	.	.	.	.	.	.
688	Cu = Ag+Cu	rem	.	3.0-3.8	<0.20	.	.	.	<0.05	.	.	.	.	21.3-24.1	.	.	.	0.25-0.55	.	.	.	.
690	Cu = Ag+Cu Al+Zn 25.1-27.1	72.0-74.6	.	3.0-3.8	<0.05	.	0.50-0.80	.	<0.025	.	.	.	.	rem	.	.	.	.	.	.	.	.
690.5	Cu = Ag+Cu	70.0-75.0	.	3.0-4.0	.	.	0.50-1.50	.	.	.	.	0.10-0.60	.	rem	.	.	.	.	.	.	.	0.01-0.20

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
691	Cu = Ag+Cu	81.0-84.0	.	0.7-1.2	<0.25	<0.10	0.8-1.4	.	<0.05	.	.	0.8-1.3	<0.10	rem	.	.	.	.	.	.	.	.
694	Cu = Ag+Cu	80.0-83.0	.	.	<0.20	.	.	.	<0.30	.	.	3.5-4.5	.	rem	.	.	.	.	.	.	.	.
694.3	Cu = Ag+Cu	80.0-83.0	.	.	<0.20	.	.	.	<0.30	.	.	3.5-4.5	.	rem	0.03-0.06	.	.	.	.	.	.	.
694.4	Cu = Ag+Cu	80.0-83.0	.	.	<0.20	.	.	.	<0.30	.	0.03-0.06	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	.	.	0.50-1.50	.	.	2.5-3.5	.	rem	.	.	.	.	.	.	.	.
697.1	Cu = Ag+Cu	75.0-80.0	.	.	<0.20	<0.40	.	.	0.50-1.50	.	.	2.5-3.5	.	rem	0.03-0.06	.	.	.	.	.	.	.
697.2	Cu = Ag+Cu	75.0-80.0	.	.	<0.20	<0.40	.	.	0.50-1.50	.	0.03-0.06	2.5-3.5	.	rem	.	.	.	.	.	.	.	.
697.3	Cu = Ag+Cu	75.0-80.0	.	.	<0.20	.	.	0.03-0.06	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; C, Cd <0.05	rem	<0.05	1.4-2.3	<0.10	40.0-48.0	<0.10	.	<0.02	.	.	.	.	<0.14	<0.01	.	.	<0.20	.	.	.	.
699.1	Cu = Ag+Cu	rem	.	0.25-0.80	1.0-1.4	28.0-32.0	.	.	<0.01	.	.	.	.	3.0-5.0	.	.	.	.	.	.	.	.
699.5	Cu = Ag+Cu	51.0-54.0	.	.	.	36.0-40.0	8.5-10.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
701	Cu = Ag+Cu	rem	.	.	<0.05	<0.50	3.0-4.0	.	.	.	.	.	.	<0.25	.	.	.	.	.	.	.	.
702	Cu = Ag+Cu	rem	.	.	<0.10	<0.40	2.0-3.0	.	<0.05	.	.	.	.	.	.	.	.	.	.	.	.	.
702.3	Cu = Ag+Cu Ag+B <0.10	rem	.	.	.	.	2.2-3.2	.	.	.	.	0.40-0.80	0.10-0.50	0.50-2.00	.	.	.	.	.	.	.	.
702.5	Cu = Ag+Cu	rem	.	.	<0.20	<0.10	2.2-4.2	.	<0.05	.	.	0.25-1.20	.	<1.00	.	.	.	.	.	0.05-0.30	.	.
702.6	Cu = Ag+Cu	rem	.	.	.	.	1.0-3.0	<0.01	.	.	.	0.20-0.70	.	.	.	.	.	.	.	.	.	.
702.7	Cu = Ag+Cu	rem	.	.	0.28-1.00	<0.15	1.0-3.0	.	<0.05	.	.	0.20-1.00	0.10-1.00	<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	<0.30	.	.	.	.	.	.	.	.
702.9	Cu = Ag+Cu	rem	.	.	<0.015	.	1.3-1.7	0.020-0.040	<0.02	.	.	0.22-0.30	2.1-2.7	<0.30	.	.	.	.	.	.	.	.
703	Cu = Ag+Cu+ Fe+Mn+Ni	>99.50	.	.	<0.05	<0.50	4.7-5.7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
703.2	Cu = Ag+Cu	rem	.	0.20-1.20	.	.	2.5-5.0	.	.	.	.	0.20-1.20	.	.	.	.	.	.	0.18-0.50	.	.	.
704	Cu = Ag+Cu	rem	.	.	1.3-1.7	0.30-0.80	4.8-6.2	.	<0.05	.	.	.	.	<1.00	.	.	.	.	.	.	.	.
704.4	Cu = Ag+Cu, C<0.05	rem	.	.	1.0-1.8	0.50-1.50	4.5-6.0	.	<0.05	<0.05	.	0.35-0.45	<0.10	<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	.	.	.	.	<1.00	.	.	.	.	.	.	.	.
706.1	Cu = Ag+Cu, C<0.05	rem	.	.	1.0-2.0	0.50-1.00	10.0-11.0	.	<0.01	<0.05	.	.	.	.	.	.	.	.	.	.	.	.
706.2	Cu = Ag+Cu, C<0.05	>86.50	.	.	1.0-1.8	<1.00	9.0-11.0	<0.02	<0.02	<0.02	.	.	.	<0.50	.	.	.	.	.	.	.	.
706.9	Cu=Ag+Cu, C<0.03, Hg<0.0005	rem	.	<0.002	<0.005	<0.001	9.0-11.0	<0.001	<0.001	<0.003	<0.001	<0.02	<0.001	<0.001	<0.001	.	<0.001	<0.02	.	.	<0.001	.
707	Cu = Ag+Cu	rem	.	.	<0.05	<0.50	9.5-10.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
708	Cu = Ag+Cu	rem	.	.	<0.10	<0.15	10.5-12.5	.	<0.05	.	.	.	.	<0.20	.	.	.	.	.	.	.	.
709	Cu = Ag+Cu	rem	.	.	<0.60	<0.60	13.5-16.5	.	<0.05	.	.	.	.	<1.00	.	.	.	.	.	.	.	.
710	Cu = Ag+Cu	rem	.	.	<1.00	<1.00	19.0-23.0	.	<0.05	.	.	.	.	<1.00	.	.	.	.	.	.	.	.
711	Cu = Ag+Cu	rem	.	.	<0.10	<0.15	22.0-24.0	.	<0.05	<0.008	.	.	.	<0.20	.	.	.	.	.	.	.	.

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
711.1	Cu = Ag+Cu	rem	.	.	.	<0.35	21.5-23.5	.	.	.	.	.	.	.	.	.	.	.	.	.	<0.05	.
713	Cu = Ag+Cu	rem	.	.	<0.20	<1.00	23.5-26.5	.	<0.05	.	.	.	.	<1.00	.	.	.	.	.	.	.	.
715	Cu = Ag+Cu	rem	.	.	0.40-1.00	<1.00	29.0-33.0	.	<0.05	.	.	.	.	<1.00	.	.	.	.	.	.	.	.
715.2	Cu = Ag+Cu	>65.00	.	.	0.40-1.00	<1.00	29.0-33.0	<0.02	<0.02	<0.02	.	.	.	<0.50	.	.	.	.	.	.	.	.
715.8	Cu = Ag+Cu, C <0.70	rem	.	<0.05	<0.50	<0.30	29.0-33.0	<0.03	<0.05	<0.024	.	<0.15	.	<0.05	.	.	.	.	.	.	.	.
715.81	Cu = Ag+Cu	rem	.	.	0.40-0.70	<1.00	29.0-32.0	<0.02	<0.02	<0.01	.	<0.25	.	.	.	.	.	.	.	.	0.20-0.50	.
715.9	Cu = Ag+Cu, C<0.02, Hg<0.0005	rem	.	<0.002	<0.15	<0.50	29.0-31.0	<0.001	<0.001	<0.003	<0.001	<0.015	<0.001	<0.001	<0.001	.	<0.001	<0.05	.	<0.10	<0.001	.
716.3	Cu = Ag+Cu, C<0.06	rem	.	.	0.40-1.00	0.50-1.50	30.0-32.0	.	<0.01	<0.08	.	.	.	.	.	.	.	.	.	.	.	.
716.4	Cu = Ag+Cu, C<0.06	rem	.	.	1.7-2.3	1.5-2.5	29.0-32.0	.	<0.01	<0.03	.	.	.	.	.	.	.	.	.	.	.	.
717	Cu = Ag+Cu	rem	.	.	0.40-1.00	.	29.0-33.0	.	.	.	.	.	.	.	.	0.30-0.70	.	.	.	.	.	.
719	Cu = Ag+Cu, C<0.04	rem	.	.	<0.50	0.20-1.00	28.0-33.0	<0.02	<0.015	<0.015	.	<0.25	.	<0.05	.	.	.	.	2.2-3.0	.	0.01-0.20	0.02-0.35
721.5	Cu = Ag+Cu, C<0.10	rem	.	.	<0.10	<0.05	43.0-46.0	.	<0.05	.	.	<0.50	.	<0.20	.	.	.	.	.	.	.	.
722	Cu = Ag+Cu, C<0.03	rem	.	.	0.5-1.0	<1.00	15.0-18.0	.	<0.05	.	.	<0.03	.	<1.00	.	.	.	.	0.30-0.70	.	<0.03	.
724	Cu = Ag+Cu	rem	.	1.5-2.5	<0.10	<1.00	11.0-15.0	.	<0.05	.	.	.	<0.05	<0.50	.	.	.	.	.	0.05-0.40	.	.
724.2	Cu = Ag+Cu, C<0.05	rem	.	1.0-2.0	0.7-1.2	3.5-5.5	13.5-16.5	<0.01	<0.02	<0.15	.	<0.15	<0.10	<0.20	.	.	.	.	<0.50	<0.05	.	.
725	Cu = Ag+Cu	rem	.	.	<0.60	<0.20	8.5-10.5	.	<0.05	.	.	.	1.8-2.8	<0.50	.	.	.	.	.	.	.	.
726	Cu = Ag+Cu	91.0-93.0	.	.	<0.20	<0.20	3.5-4.5	<0.05	<0.05	.	.	.	3.5-4.5	<0.50	.	.	.	.	.	.	.	.
726.5	Cu = Ag+Cu	rem	.	.	<0.10	<0.10	7.0-8.0	.	<0.01	.	.	.	4.5-5.5	<0.10	.	.	.	.	.	.	.	.
727	Cu = Ag+Cu Nb <0.10	rem	.	.	<0.50	0.05-0.30	8.5-9.50	.	<0.02	.	.	.	5.5-6.5	<0.50	.	.	.	.	.	<0.15	.	.
728	Cu=Ag+Cu Nb 0.1-0.3, B <0.001	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	.	.	<0.001	.	.	0.005-0.15	<0.01	.
729	Cu = Ag+Cu	rem	.	.	<0.50	<0.30	14.5-15.5	.	<0.02	.	.	.	7.5-8.5	<0.50	.	.	.	.	.	<0.15	.	.
729.5	Cu = Ag+Cu	rem	.	.	<0.60	<0.60	20.0-22.0	.	<0.05	.	.	.	4.5-5.7	.	.	.	.	.	.	.	.	.
731.5	Cu = Ag+Cu	rem	.	.	<0.25	<0.50	4.0-7.0	.	<0.10	.	.	.	9.0-15.0	.	.	.	.	.	.	.	.	.
732	Cu = Ag+Cu	rem	.	.	<0.06	<1.00	19.0-23.0	.	<0.05	.	.	.	3.0-6.0	.	.	.	.	.	.	.	.	.
735	Cu = Ag+Cu	70.5-73.5	.	.	<0.25	<0.50	16.5-19.5	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
738	Cu = Ag+Cu	68.5-71.5	.	.	<0.25	<0.50	11.0-13.0	.	<0.05	.	.	.	.	rem	.	.	.	.	.	.	.	.
740	Cu = Ag+Cu	69.0-73.5	.	.	<0.25	<0.50	9.0-11.0	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
743	Cu = Ag+Cu	63.0-66.0	.	.	<0.25	<0.50	7.0-9.0	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
744	Cu = Ag+Cu	62.0-66.0	.	.	<0.05	.	.	.	<0.05	.	.	.	.	rem	.	.	.	.	.	.	.	.
745	Cu = Ag+Cu	63.5-66.5	.	.	<0.25	<0.50	9.0-11.0	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
752	Cu = Ag+Cu	63.5-66.5	.	.	<0.25	<0.50	16.5-19.5	.	<0.05	.	.	.	.	rem	.	.	.	.	.	.	.	.
754	Cu = Ag+Cu	63.5-66.5	.	.	<0.25	<0.50	14.0-16.0	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
757	Cu = Ag+Cu	63.5-66.5	.	.	<0.25	<0.50	11.0-13.0	.	<0.05	.	.	.	.	rem	.	.	.	.	.	.	.	.
757.2	Cu = Ag+Cu	60.0-65.0	.	.	<0.25	0.05-0.30	11.0-13.0	.	<0.04	.	.	.	.	rem	.	.	.	.	.	.	.	.
759	Cu = Ag+Cu Ni = Ni+Co	60.0-65.0	.	.	<0.25	<0.50	17.0-19.0	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
760	Cu = Ag+Cu Ni = Ni+Co	60.0-63.0	.	.	<0.25	<0.50	7.0-9.0	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
761	Cu = Ag+Cu Ni = Ni+Co	59.0-63.0	.	.	<0.25	<0.50	7.0-9.0	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
762	Cu = Ag+Cu Ni = Ni+Co	57.0-61.0	.	.	<0.25	<0.50	11.0-13.5	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
763	Cu = Ag+Cu Ni = Ni+Co	60.0-64.0	.	.	<0.50	<0.50	17.0-19.0	.	0.50-2.00	.	.	.	.	rem	.	.	.	.	.	.	.	.
763.9	Cu = Ag+Cu Ni = Ni+Co	59.0-63.0	.	.	<0.50	<0.50	23.0-26.0	.	0.8-1.1	.	.	.	0.40-0.60	rem	.	.	.	.	.	.	.	.
764	Cu = Ag+Cu Ni = Ni+Co	58.5-61.5	.	.	<0.25	<0.50	16.5-19.5	.	<0.05	.	.	.	.	rem	.	.	.	.	.	.	.	.
766	Cu = Ag+Cu Ni = Ni+Co	55.0-58.0	.	.	<0.25	<0.50	11.0-13.5	.	<0.10	.	.	.	.	rem	.	.	.	.	.	.	.	.
767	Cu = Ag+Cu Ni = Ni+Co	55.0-58.0	.	.	.	<0.50	14.0-16.0	.	.	.	.	.	.	rem	.	.	.	.	.	.	.	.
770	Cu = Ag+Cu Ni = Ni+Co	53.5-56.5	.	.	<0.25	<0.50	16.5-19.5	.	<0.05	.	.	.	.	rem	.	.	.	.	.	.	.	.
770.1	Cu = Ag+Cu Ni = Ni+Co	54.0-56.0	.	.	<0.30	0.05-0.35	17.0-19.0	.	<0.03	.	.	.	.	rem	.	.	.	.	.	.	.	.
773	Cu = Ag+Cu Ni = Ni+Co	46.0-50.0	.	<0.01	<0.30	.	9.0-11.0	<0.25	<0.05	.	.	0.04-0.25	.	rem	.	.	.	.	.	.	.	.
773.1	Cu = Ag+Cu Ni = Ni+Co	46.0-56.0	.	<0.01	.	<0.50	9.0-11.0	<0.25	<0.05	.	.	0.04-0.25	.	rem	.	.	.	.	.	.	.	.
774	Cu = Ag+Cu Ni = Ni+Co	43.0-47.0	.	.	.	.	9.0-11.0	.	<0.20	.	.	.	.	rem	.	.	.	.	.	.	.	.
776	Cu = Ag+Cu Ni = Ni+Co	42.0-45.0	.	.	<0.20	<0.25	12.0-14.0	.	<0.25	.	.	.	<0.15	rem	.	.	.	.	.	.	.	.
782	Cu = Ag+Cu Ni = Ni+Co	63.0-67.0	.	.	<0.35	<0.50	7.0-9.0	.	1.5-2.5	.	.	.	.	rem	.	.	.	.	.	.	.	.
788	Cu = Ag+Cu Ni = Ni+Co	63.0-67.0	.	.	<0.25	<0.50	9.0-11.0	.	1.5-2.0	.	.	.	.	rem	.	.	.	.	.	.	.	.
790	Cu = Ag+Cu Ni = Ni+Co	63.0-67.0	.	.	<0.35	<0.50	11.0-13.0	.	1.5-2.2	.	.	.	.	rem	.	.	.	.	.	.	.	.
792	Cu = Ag+Cu Ni = Ni+Co	59.5-66.5	.	.	<0.25	<0.50	11.0-13.0	.	0.8-1.4	.	.	.	.	rem	.	.	.	.	.	.	.	.
793	Cu = Ag+Cu Ni = Ni+Co	55.0-59.00	.	.	<0.50	<0.50	11.0-13.0	.	0.50-2.00	.	.	.	.	rem	.	.	.	.	.	.	.	.
796	Cu = Ag+Cu Ni = Ni+Co	43.5-46.5	.	.	.	1.5-2.5	9.0-11.0	.	0.8-1.2	.	.	.	.	rem	.	.	.	.	.	.	.	.
796.2	Cu = Ag+Cu Ni = Ni+Co	46.0-48.0	.	.	.	<0.50	8.0-11.0	.	0.50-2.00	.	.	.	.	rem	.	.	.	.	.	.	.	.
798	Cu = Ag+Cu Ni = Ni+Co	45.5-48.5	.	.	<0.25	1.5-2.5	9.0-11.0	.	1.5-2.5	.	.	.	.	rem	.	.	.	.	.	.	.	.
798.1	Cu = Ag+Cu Ni = Ni+Co	46.0-48.0	.	.	.	<0.50	8.0-11.0	.	2.0-3.5	.	.	.	.	rem	.	.	.	.	.	.	.	.
798.2	Ni = Ni+Co	46.0-48.0	.	.	.	<0.50	8.0-11.0	.	2.0-3.5	.	.	.	.	rem	.	.	.	.	.	.	.	.
798.3	Cu = Ag+Cu Ni = Ni+Co	45.5-47.0	.	.	<0.45	0.15-0.55	9.0-10.5	.	1.0-2.5	.	.	.	.	rem	.	.	.	.	.	.	.	.
799	Cu = Ag+Cu Ni = Ni+Co	47.5-50.5	.	.	<0.25	<0.50	6.5-8.5	.	1.0-1.5	.	.	.	.	rem	.	.	.	.	.	.	.	.
801	Cu = Ag+Cu Ni = Ni+Co	>99.95	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
803	Cu = Ag+Cu Ni = Ni+Co	>99.95	>0.034	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
804.1	Cu = Ag+Cu Ni = Ni+Co	>99.90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
805	Cu=Ag+Cu Ni=Ni+Co, B <0.02	>99.75	>0.034	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
807	B <0.02	>99.75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
809		>99.70	>0.034	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
812		>99.70	.	.	.	.	.	0.040-0.065	.	.	.	.	.	.	.	.	.	.	.	.	.	.
813		>98.50	.	.	.	.	.	.	.	.	.	.	.	.	.	0.02-0.10	.	0.6-1.0	.	.	.	.
814		>98.50	.	.	.	.	.	.	.	.	.	.	.	.	.	0.02-0.10	.	0.6-1.0	.	.	.	.

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	.	.	.	.	.	.	.	.	0.30-0.55	.	0.25-1.50	.	.	.	.
818		>95.60	0.80-1.20	.	.	.	.	.	.	.	.	.	.	.	.	0.30-0.55	.	1.4-1.7	.	.	.	.
820		>95.00	.	<0.10	<0.10	.	<0.20	.	<0.02	.	.	<0.15	<0.10	<0.10	.	0.45-0.80	.	2.4-2.7	<0.10	.	.	.
821		>95.50	.	.	.	.	0.25-1.50	.	.	.	.	.	.	.	.	0.35-0.80	.	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	.	1.65-1.75	.	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	.	1.90-2.15	.	0.35-0.70	<0.10	.	.	.
825.1		>95.50	.	<0.15	<0.25	.	<0.20	.	<0.02	.	.	0.20-0.35	<0.10	<0.10	.	1.90-2.15	.	1.0-2.0	<0.10	.	.	.
826		>95.20	.	<0.15	<0.25	.	<0.20	.	<0.02	.	.	0.20-0.35	<0.10	<0.10	.	2.25-2.45	.	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	.	2.35-2.55	.	.	<0.10	.	.	.
828		>94.80	.	<0.15	<0.25	.	<0.20	.	<0.02	.	.	0.20-0.35	<0.10	<0.10	.	2.50-2.75	.	0.35-0.70	<0.10	.	.	.
833		92.0-94.0	.	.	.	.	.	.	1.0-2.0	.	.	.	1.0-2.0	2.0-6.0	.	.	.	.	.	.	.	.
834		88.0-92.0	.	.	.	.	.	.	<0.50	.	.	.	<0.20	8.0-12.0	.	.	.	.	.	.	.	.
834.1		88.0-91.0	.	<0.005	<0.05	.	<0.05	.	<0.10	.	.	<0.005	1.0-2.0	rem	.	.	.	.	.	.	.	.
834.2		88.0-92.0	.	.	<0.10	.	.	.	<0.50	.	.	.	0.25-0.70	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	3.5-5.5	<0.08	<0.25	<0.005	5.5-6.5	1.0-2.5	.	.	.	.	.	.	.	.
835.2		rem	.	.	<0.30	.	<1.0	.	3.5-4.5	.	<0.25	.	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	.	<0.50	.	.	<0.005	<1.00	rem	0.05-0.20	.	.	.	.	.	.	.
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	.	4.0-6.0	.	<0.50	<0.005	2.0-3.5	7.5-9.5	<0.50	.	<0.10	.	.	.	.	.
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	.	.	.	.	.	.	.	.
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	.	.	<1.0	.	7.0-9.0	.	.	<0.20	3.0-4.5	7.0-11.0	.	.	<0.05	.	.	.	.	.
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		68.0-72.0	.	.	.	.	.	.	<0.50	.	.	.	<0.50	rem	.	.	.	.	.	.	.	.
853.1		68.0-73.0	.	<0.01	<0.80	.	<1.0	.	2.0-5.0	.	.	.	<1.50	rem	0.02-0.06	.	.	.	.	.	.	.
854	Cu = Cu+Ni	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	Cu = Cu+Ni	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	.	.	<0.20	<0.20	<0.20	.	<0.20	.	.	.	<0.20	rem	.	.	.	.	.	.	.	.
857	Cu = Cu+Ni	58.0-64.0	.	<0.8	<0.70	.	<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	.	<0.50	<0.50	<0.25	<0.50	<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	.	.	.	<0.20	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	2.5-4.0	.	<0.20	.	.	.	<1.00	rem	.	.	.	.	.	.	.	.
872		>89.00	.	<1.5	<2.50	<1.50	.	.	<0.50	.	.	1.0-5.0	<1.00	<5.00	.	.	.	.	.	.	.	.
873		>94.00	.	.	<0.20	0.8-1.5	.	.	<0.20	.	.	3.5-4.5	.	<0.25	.	.	.	.	.	.	.	.
874		>79.00	.	<0.8	.	.	.	.	<1.0	.	.	2.5-4.0	.	12.0-16.0	.	.	.	.	.	.	.	.
874.1		>79.00	.	<0.8	.	.	.	.	<1.0	.	.	2.5-4.0	.	12.0-16.0	0.03-0.06	.	.	.	.	.	.	.
874.2		>79.00	.	<0.8	.	.	.	.	<1.0	.	0.03-0.06	2.5-4.0	.	12.0-16.0	.	.	.	.	.	.	.	.
874.3		>79.00	.	<0.8	.	.	.	0.03-0.06	<1.0	.	.	2.5-4.0	.	12.0-16.0	.	.	.	.	.	.	.	.
875		>79.00	.	<0.5	.	.	.	.	<0.50	.	.	3.0-5.0	.	12.0-16.0	.	.	.	.	.	.	.	.
875.1		>79.00	.	<0.50	.	.	.	.	<0.50	.	.	3.0-5.0	.	12.0-16.0	0.03-0.06	.	.	.	.	.	.	.
875.2		>79.00	.	<0.50	.	.	.	.	<0.50	.	0.03-0.06	3.0-5.0	.	12.0-16.0	.	.	.	.	.	.	.	.
875.3		>79.00	.	<0.50	.	.	.	0.03-0.06	<0.50	.	.	3.0-5.0	.	12.0-16.0	.	.	.	.	.	.	.	.
876		>88.00	.	.	<0.20	<0.25	.	.	<0.50	.	.	3.5-4.5	.	4.0-7.0	.	.	.	.	.	.	.	.
876.1		>90.00	.	.	<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	.	.	.	.	.	.	.
893.2		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	.	.	4.0-6.0	.	.	.	.	.
893.25	Misch metal 0.10-1.0	84.0-88.0	.	<0.005	<0.15	.	<1.0	<0.10	<0.10	<0.08	<0.50	<0.005	9.0-11.0	<1.00	.	.	2.7-3.7	.	.	.	.	.
895.1	Se 0.35-0.75	86.0-88.0	.	<0.005	<0.20	.	<1.0	<0.05	<0.25	<0.08	<0.25	<0.005	4.0-6.0	4.0-6.0	.	.	0.5-1.5	.	.	.	.	.
895.2	Se 0.80-1.10	85.0-87.0	.	<0.005	<0.20	.	<1.0	<0.05	<0.25	<0.08	<0.25	<0.005	5.0-6.0	4.0-6.0	.	.	1.6-2.2	.	.	.	.	.
895.5	Se 0.01-0.10	58.0-54.0	.	0.10-0.60	<0.50	.	<1.0	<0.01	<0.10	<0.05	.	.	0.50-1.50	32.0-40.0	.	.	0.6-1.2	.	.	.	.	.
898.31	Misch metal 0.10-1.0	87.0-91.0	.	<0.005	<0.30	.	<1.0	<0.05	<0.10	<0.08	<0.25	<0.005	2.7-3.7	2.0-4.0	.	.	2.7-3.7	.	.	.	.	.
898.33	Misch metal 0.10-1.0	87.0-91.0	.	<0.005	<0.30	.	<1.0	<0.05	<0.10	<0.08	<0.25	<0.005	4.0-6.0	2.0-4.0	.	.	1.7-2.7	.	.	.	.	.
898.35	Misch metal 0.10-1.0	85.0-89.0	.	<0.005	<0.20	.	<1.0	<0.10	<0.10	<0.08	<0.35	<0.005	6.0-7.5	2.0-4.0	.	.	1.7-2.7	.	.	.	.	.
898.37	Misch metal 0.10-1.0	84.0-88.0	.	<0.005	<0.30	.	<1.0	<0.05	<0.10	<0.08	<0.25	<0.005	3.0-4.0	6.0-10.0	.	.	0.7-1.2	.	.	.	.	.
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
898.44		83.0-86.0	.	<0.005	<0.30	.	<1.0	<0.05	<0.20	<0.08	<0.25	<0.005	3.0-5.0	7.0-10.0	.	.	2.0-4.0	.	.	.	.	.
899.4		64.0-68.0	.	<0.005	0.7-2.0	<0.20	20.0-23.0	0.10-0.15	<0.01	<0.05	<0.10	<0.15	3.0-5.0	3.0-5.0	.	.	4.0-5.5	.	.	.	.	.
902		91.0-94.0	.	<0.005	<0.20	.	<0.50	<0.05	<0.30	<0.05	<0.20	<0.005	6.0-8.0	<0.50	.	.	.	.	.	.	.	.
902.5		89.0-91.0	.	<0.005	<0.25	<0.10	<0.50	<0.05	<0.30	<0.05	<0.20	<0.005	9.0-11.0	<0.50	.	.	.	.	.	.	.	.
903		86.0-89.0	.	<0.005	<0.20	.	<1.0	<0.05	<0.30	<0.05	<0.20	<0.005	7.5-9.0	3.0-5.0	.	.	.	.	.	.	.	.
905		86.0-89.0	.	<0.005	<0.20	.	<1.0	<0.05	<0.30	<0.05	<0.20	<0.005	9.0-11.0	1.0-3.0	.	.	.	.	.	.	.	.
907		88.0-90.0	.	<0.005	<0.15	.	<0.50	<0.30	<0.50	<0.05	<0.20	<0.005	10.0-12.0	<0.50	.	.	.	.	.	.	.	.
907.1		rem	.	<0.005	<0.10	.	<0.10	0.50-1.20	<0.25	.	.	<0.005	10.0-12.0	<0.05	.	.	.	.	.	.	.	.
908		85.0-89.0	.	<0.005	<0.15	.	<0.50	<0.30	<0.25	<0.05	<0.20	<0.005	11.0-13.0	<0.25	.	.	.	.	.	.	.	.
908.1		rem	.	<0.005	<0.15	.	<0.50	0.15-0.80	<0.25	<0.05	<0.20	<0.005	11.0-13.0	<0.30	.	.	.	.	.	.	.	.
909		86.0-89.0	.	<0.005	<0.15	.	<0.50	<0.05	<0.25	<0.05	<0.20	<0.005	12.0-14.0	<0.25	.	.	.	.	.	.	.	.
910		84.0-86.0	.	<0.005	<0.10	.	<0.8	<0.05	<0.20	<0.5	<0.20	<0.005	14.0-16.0	<1.50	.	.	.	.	.	.	.	.
911		>99.70	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
911		82.0-85.0	.	<0.005	<0.25	.	<0.50	<1.00	<0.25	<0.05	<0.20	<0.005	15.0-17.0	<0.25	.	.	.	.	.	.	.	.
913		79.0-82.0	.	<0.005	<0.25	.	<0.50	<1.00	<0.25	<0.05	<0.20	<0.005	18.0-20.0	<0.25	.	.	.	.	.	.	.	.
916		86.0-89.0	.	<0.005	<0.20	.	1.2-2.0	<0.30	<0.25	<0.05	<0.20	<0.005	9.7-10.8	<0.25	.	.	.	.	.	.	.	.
917		84.0-87.0	.	<0.005	<0.20	.	1.2-2.0	<0.30	<0.25	<0.05	<0.20	<0.005	11.3-12.5	<0.25	.	.	.	.	.	.	.	.
922		86.0-90.0	.	<0.005	<0.25	.	<1.0	<0.05	1.0-2.0	<0.05	<0.25	<0.005	5.5-6.5	3.0-5.0	.	.	.	.	.	.	.	.
922.1		86.0-89.0	.	<0.005	<0.25	.	0.7-1.0	<0.03	1.7-2.5	<0.05	<0.20	<0.005	4.5-5.5	3.0-4.5	.	.	.	.	.	.	.	.
922.2		86.0-88.0	.	.	<0.25	.	0.5-1.0	<0.05	1.5-2.5	.	.	.	5.0-6.0	3.0-5.5	.	.	.	.	.	.	.	.
923		85.0-89.0	.	<0.005	<0.25	.	<1.0	<0.05	0.30-1.00	<0.05	<0.25	<0.005	7.5-9.0	2.5-5.0	.	.	.	.	.	.	.	.
923.1		rem	.	<0.005	.	.	<1.0	.	0.30-1.50	.	.	<0.005	7.5-8.5	3.5-4.5	.	.	<0.03	.	.	.	.	.
924		86.0-89.0	.	<0.005	<0.25	.	<1.0	<0.05	1.0-2.5	<0.05	<0.25	<0.005	9.0-11.0	1.0-3.0	.	.	.	.	.	.	.	.
924.1		rem	.	<0.005	<0.20	.	<0.20	.	2.5-3.5	.	<0.25	<0.005	6.0-8.0	1.5-3.0	.	.	<0.05	.	.	.	.	.
925		85.0-88.0	.	<0.005	<0.30	.	0.8-1.5	<0.30	1.0-1.5	<0.05	<0.25	<0.005	10.0-12.0	<0.50	.	.	.	.	.	.	.	.
926		86.0-88.5	.	<0.005	<0.20	.	<0.7	<0.03	0.8-1.5	<0.05	<0.25	<0.005	9.3-10.5	1.3-2.5	.	.	.	.	.	.	.	.
926.1		rem	.	<0.005	<0.15	.	<1.0	.	0.30-1.50	.	.	<0.005	9.5-10.5	1.7-2.8	.	.	<0.03	.	.	.	.	.
927		rem	.	<0.005	<0.20	.	<1.0	<0.25	1.0-2.5	<0.05	<0.25	<0.005	9.0-11.0	<0.70	.	.	.	.	.	.	.	.
927.1		rem	.	<0.005	<0.20	.	<2.0	<0.10	4.0-6.0	<0.05	<0.25	<0.005	9.0-11.0	<1.00	.	.	.	.	.	.	.	.
928		78.0-82.0	.	<0.005	<0.20	.	<0.8	<0.05	4.0-6.0	<0.05	<0.25	<0.005	15.0-17.0	<0.80	.	.	.	.	.	.	.	.
928.1		78.0-82.0	.	<0.005	<0.50	.	0.8-1.2	<0.05	4.0-6.0	<0.05	<0.25	<0.005	12.0-14.0	<0.50	.	.	.	.	.	.	.	.
929		82.0-86.0	.	<0.005	<0.20	.	2.8-4.0	<0.50	2.0-3.2	<0.05	<0.25	<0.005	9.0-11.0	<0.25	.	.	.	.	.	.	.	.
931		rem	.	<0.005	<0.25	.	<1.0	<0.30	2.0-5.0	<0.05	<0.25	<0.005	6.5-8.5	<2.00	.	.	.	.	.	.	.	.
932		81.0-85.0	.	<0.005	<0.20	.	<1.0	<0.15	6.0-8.0	<0.08	<0.35	<0.005	6.3-7.5	1.0-4.0	.	.	.	.	.	.	.	.
934		82.0-85.0	.	<0.005	<0.20	.	<1.0	<0.50	7.0-9.0	<0.08	<0.50	<0.005	7.0-9.0	<0.80	.	.	.	.	.	.	.	.

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
935		83.0-86.0	.	<0.005	<0.20	.	<1.0	<0.05	8.0-10.0	<0.08	<0.30	<0.005	4.3-6.0	<2.00	.	.	.	.	.	.	.	.
936		79.0-83.0	.	<0.005	<0.20	.	<1.0	<0.15	11.0-13.0	<0.08	<0.55	<0.005	6.0-8.0	<1.00	.	.	.	.	.	.	.	.
937		78.0-82.0	.	<0.005	<0.70	.	<0.50	<0.10	8.0-11.0	<0.08	<0.50	<0.005	9.0-11.0	<0.80	.	.	.	.	.	.	.	.
937.2		>83.00	.	.	<0.70	.	<0.50	<0.10	7.0-9.0	.	<0.50	.	3.5-4.5	<4.00	.	.	.	.	.	.	.	.
938		75.0-79.0	.	<0.005	<0.15	.	<1.0	<0.05	13.0-16.0	<0.08	<0.80	<0.005	6.3-7.5	<0.80	.	.	.	.	.	.	.	.
939		76.5-79.5	.	<0.005	<0.40	.	<0.8	<1.50	14.0-18.0	<0.08	<0.50	<0.005	5.0-7.0	<1.50	.	.	.	.	.	.	.	.
940		69.0-72.0	.	<0.005	<0.25	.	0.50-1.00	<0.05	14.0-16.0	<0.08	<0.50	<0.005	12.0-14.0	<0.50	.	.	.	.	.	.	.	.
941		72.0-79.0	.	<0.005	<0.25	.	<1.0	<0.05	18.0-22.0	<0.08	<0.80	<0.005	4.5-6.5	<1.00	.	.	.	.	.	.	.	.
942		68.5-75.5	.	.	<0.35	.	<0.50	.	3.0-4.0	.	<0.50	.	3.0-4.0	<3.00	.	.	.	.	.	.	.	.
943		67.0-72.0	.	<0.005	<0.15	.	<1.0	<0.08	22.0-25.0	<0.08	<0.80	<0.005	4.5-6.0	<0.80	.	.	.	.	.	.	.	.
943.1		rem	.	.	<0.50	.	0.25-1.00	<0.05	27.0-34.0	.	<0.50	.	1.5-3.0	<0.50	.	.	.	.	.	.	.	.
943.2		rem	.	.	<0.35	.	.	.	24.0-32.0	.	.	.	4.0-7.0	.	.	.	.	.	.	.	.	.
943.3		68.5-75.5	.	.	<0.70	.	<0.50	<0.10	21.0-25.0	.	<0.50	.	3.0-4.0	<3.00	.	.	.	.	.	.	.	.
944		rem	.	<0.005	<0.15	.	<1.0	<0.50	9.0-12.0	<0.08	<0.80	<0.005	7.0-9.0	<0.80	.	.	.	.	.	.	.	.
945		rem	.	<0.005	<0.15	.	<1.0	<0.05	16.0-22.0	<0.08	<0.80	<0.005	6.0-8.0	<1.20	.	.	.	.	.	.	.	.
947		85.0-89.0	.	<0.005	<0.25	<0.20	4.5-6.0	<0.05	<0.10	<0.05	<0.15	<0.005	4.5-6.0	1.0-2.5	.	.	.	.	.	.	.	.
948		84.0-89.0	.	<0.005	<0.25	<0.20	4.5-6.0	<0.05	0.30-1.00	<0.05	<0.15	<0.005	4.5-6.0	1.0-2.5	.	.	.	.	.	.	.	.
949		79.0-81.0	.	<0.005	<0.30	<0.10	4.0-6.0	<0.05	4.0-6.0	<0.08	<0.25	<0.005	4.0-6.0	4.0-6.0	.	.	.	.	.	.	.	.
952		>86.00	.	8.5-9.5	2.5-4.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
952.1		>86.00	.	8.5-9.5	2.5-4.0	<1.00	<1.0	.	<0.05	.	.	<0.25	<0.10	<0.50	.	.	.	.	.	<0.05	.	.
952.2		rem	.	9.5-10.5	2.5-4.0	<0.50	<2.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
953		>86.00	.	9.0-11.0	0.8-1.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
954		>83.00	.	10.0-11.5	3.0-5.0	<0.50	<1.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
954.1		>83.00	.	10.0-11.5	3.0-5.0	<0.50	1.5-2.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
954.2		>83.50	.	10.5-12.0	3.0-4.3	<0.50	<0.50	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
955		>78.00	.	10.0-11.5	3.0-5.0	<3.50	3.0-5.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
955.1		>78.00	.	9.7-10.9	2.0-3.5	<1.50	4.5-5.5	.	.	.	.	.	<0.20	<0.30	.	.	.	.	.	.	.	.
955.2		>74.50	.	10.5-11.5	4.0-5.5	<1.50	4.2-6.0	.	<0.03	.	.	<0.15	<0.25	<0.30	.	.	.	<0.20	<0.05	.	.	.
956		>88.00	.	6.0-8.0	.	.	<0.25	.	.	.	.	1.8-3.3	.	.	.	.	.	.	.	.	.	.
957		>71.00	.	7.0-8.5	2.0-4.0	11.0-14.0	1.5-3.0	.	<0.03	.	.	<0.10	.	.	.	.	.	.	.	.	.	.
957.1		>71.00	.	7.0-8.5	2.0-4.0	11.0-14.0	1.5-3.0	<0.05	<0.05	.	.	<0.15	.	.	.	.	.	.	.	.	.	.
957.2		>73.00	.	6.0-8.0	1.5-3.5	12.0-15.0	3.0-6.0	.	<0.03	.	.	<0.10	<0.10	<0.10	.	.	.	.	<0.20	.	.	.
958		>79.00	.	8.5-9.5	3.5-4.5	0.8-1.5	4.0-5.0	.	<0.03	.	.	<0.10	.	.	.	.	.	.	.	.	.	.
958.1		>79.00	.	8.5-9.5	3.5-4.5	0.8-1.5	4.0-5.0	.	<0.10	.	.	<0.10	.	<0.50	.	.	.	.	.	<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

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	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
962	C <0.10, Nb <1.00	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	.	.	.	.	.	.
967		rem	.	.	0.7-1.0	<0.70	29.0-33.0	.	<0.01	.	.	<0.15	.	.	.	1.10-1.20	.	.	.	.	0.01-0.20	0.1-0.2
968	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	.	.	<0.001	.	.	0.005-0.15	<0.01	.
969	Nb <0.10	rem	.	.	<0.50	0.50-0.30	14.5-15.5	.	<0.02	.	.	.	7.5-8.5	<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	.	.	.	.	.	.	<0.15	.	.
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	.	4.5-5.5	.	.	.	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	3.0-9.0	.	.	.	.	.	.	.	.
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	4.0-5.5	1.0-4.0	.	.	.	.	.	.	.	.
982		73.0-79.0	.	.	<0.70	.	<0.50	<0.10	21.0-27.0	.	<0.50	.	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	.	.	.	30.0-40.0	.	.	.	<0.50	.	.	.	.	.	.	.	.	.
988		56.5-62.5	<5.50	.	<0.35	.	.	<0.02	37.5-42.5	.	.	.	<0.25	<0.10	.	.	.	.	.	.	.	.
988.2		rem	.	.	<0.35	.	.	.	40.0-44.0	.	.	.	1.0-5.0	.	.	.	.	.	.	.	.	.
988.4		rem	.	.	<0.35	.	.	.	44.0-58.0	.	.	.	1.0-5.0	.	.	.	.	.	.	.	.	.
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	<5.0	.	0.50-2.50	.	.	.	0.50-2.50	17.0-23.0	.	.	.	.	.	.	.	.
Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr

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