

INDEX

ALLOY LISTING 24
ALLOY SPECIFICATIONS 25
ALUMINUM BRASS 11
ALUMINUM BRONZE 16, 17, 18

BERYLLIUM-COBALT 4
BISMUTH BRASS 11
BISMUTH BRONZE 18
BRASS 9, 10, 11, 13, 14, 15
BRONZE 15, 16, 17, 18

CARTRIDGE BRASS 11, 12
CHROMIUM COPPER 4
CONVERTER COPPER 5
COPPER 2, 3, 4
COPPER ALLOYS 23
COPPER IN VARIOUS FORMS 2
COPPER WIRE 2

ENVIROBRASS 7

FEDERALLOY 7
FREE CUTTING BRASS 12

GILDING METAL 5
GLOBULE ARC 2
GUN METAL 5

HIGH TENSILE BRASS 15

LEADED BRASS 12, 13
LEADED BRONZE 20, 21, 22
LEADED TIN BRONZE 20, 21, 22

MAGNESIUM ALLOY 5
MANGANESE ALLOY 5
MANGANESE BRASS 13
MANGANESE BRONZE 18

NAVAL BRASS 13
NICKEL ALLOY 6, 7
NICKEL BRASS 14
NICKEL BRONZE 18

PHOSPHOR BRASS 14
PHOSPHOR BRONZE 19
PHOSPHORUS DEOXIDIZED 2

ROD 2, 4, 5, 13, 22

SEBILOY 7
SILICON BRASS 14
SILICON BRONZE 19
SILVER ALLOY 8

TIN BRONZE 20, 21, 22
TIN COPPER 8

WIRE 2

XRF 23

CRM PURITY COPPER DISCS AND RODS

listed in mg/kg IMN in SETS only, as grouped IMN CP: 40mm Ø x 23mm 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 M04-K3	299	310	124	285	98	115	419	296	551	261	495	70	332	287	93	489	289	293	
VS M04-K2.2	51.5	54.4	33.0	29.2	31.8	23.7	48.3	35.2	59.8	41.1	54.8	34	42.6	37.7	29.7	43	40	50.4	
VS M04-K2.1	50.9	51.9	32.8	29.2	28.2	30.5	56.8	55.1	72.2	41.9	50.3	41	45.9	62.6		55	34.9	49.1	
VS M04-7	50.7	50.5	27.6	26.5	30.6	41.3	84.8	53.0	75.6	39.0	26.8	36.6	60.8		13.3	45.4	27.0	68.1	
VS M04-5	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 M04-6	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	
VS M04-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	
VS M04-1	11.2	0.96		0.19			2.0	0.97	0.34		1.1	2.9	2.8	3.2	0.7				
VS M04-4	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	
VS M04-8	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	
VS M04-3	2.9		0.11		0.30		3.9	0.49	0.73		4.2	4.4	0.55			0.48		0.97	
VS M04-2	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	
VS M03-4	0.41	0.14	0.73	0.93	1.37	0.38	40.2	7.7	0.80	34.6	9.4		0.45	0.42		0.64		9.8	Al:1.9 Mg:1.01
SET ONLY, AS GROUPED																			
IMN CS1	53.1	2.0	1.1	1.0	0.6	(0.3)	18.4	29.0	46.8	57.7	60.5	65.9	3.0	61.5	(3.0)	52.9	2.1	24.1	B:(1.1)
IMN CS2	45.6	7.4	6.2	7.4	3.6	35.8	30.5	35.3	26.7	33.8	38.6	44.9	7.5	39.0	(9.4)	33.7	5.6	8.9	B:(2.8)
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	42.2	39.6	35.5	24.3	7.0	82.0	8.3	7.2	6.3	7.6	41.3	36.8	6.7	(46.5)	6.2	32.9	44.0	B:(21.7)
IMN CS5	320	70.5	59.7	66.1	37.5	1.0	90.9	4.3	4.4	2.0	5.0	12.0	63.9	0.9	(54.8)	0.9	49.8	101	B:(35.2)
SET ONLY, AS GROUPED																			
IMN CP1	12	0.4	1.0	0.6	0.2	0.3	10	1.3	3.4	2.0	1.7	6.3	11	<1		5.6	3.0	1.9	
IMN CP2	36	140		72	39	0.5	8.1	5.9	20	11	120	35	160	77	(4)	4.8	12	92	
IMN CP3	60	63	47	35	20	45	15	30	13	44	81	60	120	43	(8)	17	46	33	
IMN CP4	110	14	13	11	4.2	86	44	55	3.4	130	28	94	48	10	(3)	40	75	17	
IMN CP5	31	65	9.4	2.5	34	48	77	49	39	110	13	21	27	35	(82)	2.1	7.8	38	
IMN CP6	20	0.85			<1	0.3	6.4	0.6	2.7	1.7	2.7	7.5	0.4	<1		0.7		1.4	

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

COPPER WIRE FOR GLOBULE ARC WORK

analysis listed in mg/kg wire form, intended for globule arc work ClC: 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
2	CURM 09.03	0.056	99.82	0.012	0.0033	<0.0003	<0.001	<0.0003	<0.0003	<0.0003	<0.0005	<0.0005	<0.001	<0.001
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
CURM 09.03		<0.0003						<0.001		50 mm Ø x 10-12 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	Ind	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)			

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	1.2	.
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-COBALT ALLOY

= class, where 1 = CRM and 2 = RM
 F = Form, where w = wrought and c = cast
 36X: 38-41 mm Ø x ~15-17 mm CTIF: 60 mm Ø x 5 mm BS: 38 mm Ø x ~7 to 19+ mm IARM: 31 mm Ø x 2 or 18 mm

#	F	Number	Be	Co	Cu	Al	Cr	Fe	Mn	Ni	Pb	Si	Sn	Zn	mass % except * = ppm
2	c	CTIF 4584	2.53	0.04	97.05	0.033	.	0.120	(0.002)	0.015	(0.002)	0.166	0.022	0.022	
2	c	CTIF 4872	1.93	0.400	97.00	0.059	(0.04)	0.107	0.008	0.103	0.019	0.16	0.044	0.119	
1	w	36X CBC4E	1.869	0.215	97.47	0.0258	.	0.0274	.	0.0080	0.329	0.048	0.002	0.003	Mg: 0.0035 P: 0.0027
1	w	36X CBC3D	1.840	0.209	97.77	0.019	.	0.046	.	0.007	0.0025	0.039	0.0021	0.004	Mg: 0.0040
1	w	BS 172Be-2**	1.8	0.05	97.7	0.03	0.014	0.13	0.007	0.16	0.04	0.026	0.015	0.01	** Provisional Analysis
1	w	IARMCu172-18	1.79	0.344	97.7	0.022	0.0007	0.029	0.0017	0.010	(0.005)	0.057	0.0009	0.008	P: (0.003)
2	c	CTIF 4766	1.58	0.64	96.83	0.027	(0.2)	0.165	0.007	0.203	0.053	0.11	0.100	0.070	
2	c	CTIF CuBeCo6	1.54	(1.9)	93.09	0.135	0.0576	0.109	0.0173	(1.4)	0.0397	0.26	0.0135	0.0330	Ag: 1.37
2	c	CTIF 4583	0.84	(0.002)	96.35	0.029	.	(0.15)	0.064	2.02	0.084	0.08	0.25	0.094	
1	w	36X CBC6	0.507	1.045	97.11	0.0490	.	0.0243	.	1.132	0.0014	0.0263	0.0041	0.0010	Mg: 0.0070 Zr: 0.0553
1	w	36X CBC2F	0.439	2.22	97.15	0.0097	.	0.0076	P: 0.0067	0.121	(0.0008)	0.0257	(0.0007)	0.0018	Ag: 0.0013 Mg: 0.0036
1	w	BS 17500	0.43	2.31	(97.1)	0.0210	0.0015	0.0262	0.081	0.095	0.0005	0.0641	(0.0002)	0.0065	Ca: 54* C: 20* 17025
1	w	36X CBC5B	0.404	0.0084	97.61	0.0104	.	0.0108	.	1.905	0.0015	0.004	0.0013	0.0010	Ag: 0.0011 Mg: 0.0009
1	c	CTIF 4873	0.10	0.86	98.60	0.069	0.080	0.135	(0.002)	0.050	(0.003)	0.071	(0.007)	(0.003)	

CHROMIUM COPPER

= class, where 1 = CRM and 2 = RM

#	Number	Cr	Ag	Al	Fe	Mn	Ni	Pb	Si	Sn	Zn	Zr	Cu
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 158B	0.85	(0.01)	0.002	0.090	0.019	0.32	0.01	0.02	0.01	0.014	.	98.5
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 CCR1E	0.652	0.0042	0.0013	0.0170	.	0.0111	0.0008	.	0.0018	(0.0011)	0.079	99.24
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 158C	(0.001)	0.002	0.002	.	<0.0005	0.002	0.005	0.003	0.002	31 mm Ø x 2 (OK) or 18 (LAST) mm
IARM 158B	(0.001)	0.002	0.002	.	<0.0005	0.002	0.005	0.003	0.002	31 mm Ø x 2 or 18 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
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 CCR1E	0.0007	.	.	(0.0003)	.	.	0.0223	0.0016	.	~50 mm Ø x ~17 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

IMN CT: 40 mm Ø x 30 mm

IMN CG, CH: 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	0.018	0.051	.	0.17	0.48	0.082	0.013	0.054	0.33	0.062	0.24	0.053	0.28
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	.	0.045	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 GILDING METAL SET

available in SET/5 only

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	0.0038	0.0400	0.0720	0.000091	0.00063	0.0230	95.69	0.2500	0.0030	0.0059	0.0280	0.0060	0.0430	0.000044	0.0032	0.1500	0.0065	3.57
IMN MI2	0.0090	0.0550	0.0540	0.00085	0.00056	0.0160	93.35	0.1600	0.0081	0.0180	0.0220	0.0160	0.0490	0.0019	0.0120	0.1000	0.0110	6.19
IMN MI3	0.0200	0.0150	0.0340	0.0019	0.0026	0.0110	91.46	0.0860	0.0350	0.0730	0.0150	0.0420	0.0230	.	0.0310	0.0670	0.0031	8.01
IMN MI4	0.0260	0.0079	0.0031	0.0065	0.0026	0.0054	88.35	0.0410	0.0500	0.1400	0.0073	0.0700	0.0120	0.0006	0.0600	0.0130	0.0021	11.13
IMN MI5	0.0330	0.0021	0.0150	0.0072	0.0043	0.0012	94.71	0.0150	0.0690	0.2500	0.0026	0.0960	0.0019	0.0096	0.0820	0.0040	.	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 *	6.0	3.9	5.8	0.49	0.14	rem	0.10	0.005	0.01	0.015	0.015	0.015	.	* Provisional Analysis				
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 GM21B	4.96	4.50	7.53	0.197	0.693	78.86	0.701	0.173	0.333	0.459	Se:0.173	Cd:0.249	.	0.0697	0.0628	1.033	0.0213	
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 71.32	6.52	6.46	4.43	0.70	0.35	80.48	0.34	0.12	0.25	0.051	last	0.05	0.046	0.016	0.08	0.26	0.022	
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 GM29A	4.23	6.12	0.050	0.0289	0.0102	89.36	0.0026	(0.0004)	0.0017	0.0019	.	(0.0004)	(0.0005)	0.138	0.0024	0.0015	0.0027	
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 IN SET/6 ONLY

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

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 only

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 available in SETS only, as grouped

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	this item also available individually				.	.	.	.	.	.	.	.	.	0.87
IMN ME3	70.70	Rem	this item also available individually				.	.	.	.	.	.	.	.	.	1.11
IMN ME4	69.40	Rem	this item also available individually				.	.	.	.	.	.	.	.	.	1.21
IMN ME5	68.53	Rem	this item also available individually				.	.	.	.	.	.	.	.	.	1.42
IMN MB1	60.66	39.39	this item also available individually				.	.	.	.	.	.	.	.	.	.
IMN MB2	67.17	32.80	this item also available individually				.	.	.	.	.	.	.	.	.	.
IMN MB3	73.26	26.67	this item also available individually				.	.	.	.	.	.	.	.	.	.
IMN MB4	78.77	21.20	this item also available individually				.	.	.	.	.	.	.	.	.	.
IMN MB5	84.25	15.63	this item also available individually				.	.	.	.	.	.	.	.	.	.
IMN MB6	90.07	9.95	this item also available individually				.	.	.	.	.	.	.	.	.	.
IMN MB7	95.00	4.99	this item also available individually				.	.	.	.	.	.	.	.	.	.
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
C38.06-1	(62)	rem	<0.001	<0.001	<0.0005	<0.005	<0.001	<0.005	0.002	<0.002	<0.002	<0.002
C30.17	61.6	rem	<0.005	<0.005	<0.005	1.4	<0.005	0.01	0.01	<0.005	<0.005	<0.01
C30.16	61.2	rem	<0.002	<0.005	<0.002	0.90	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
C38.01	(61)	rem	0.003	0.03	<0.0005	0.01	0.009	0.01	0.20	0.02	<0.0005	0.20
C38.02	(61)	rem	0.004	0.06	0.0005	0.09	0.14	0.03	0.10	0.06	0.01	0.09
C38.03	(61)	rem	0.06	0.08	0.008	0.05	0.07	0.13	0.06	0.08	0.07	0.05
C38.04	(61)	rem	0.02	0.04	0.008	0.04	0.22	0.06	0.03	0.12	0.12	0.02
C38.05	(61)	rem	0.12	0.01	0.01	0.008	0.02	0.19	0.02	0.01	0.14	0.01
C30.12	60.85	rem	<0.005	<0.005	<0.002	<0.005	0.90	0.52	<0.01	<0.005	<0.005	<0.01
C30.03	60.6	39.3	<0.002	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
C30.13	60.6	rem	<0.002	<0.005	<0.002	<0.005	1.9	<0.01	<0.01	<0.005	<0.005	<0.01
C30.15	60.6	rem	<0.002	<0.005	<0.002	0.55	<0.005	<0.01	<0.01	<0.005	<0.005	<0.01
C30.14	60.5	rem	<0.005	<0.005	<0.005	<0.01	2.4	1.0	<0.01	<0.005	<0.005	<0.005
C30.22	58.28	rem	<0.003	0.011	<0.005	0.006	<0.005	<0.01	1.05	<0.012	<0.005	0.009
C30.02	55.6	rem	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01
C30.01	51.48	rem	<0.002	<0.005	0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01

last of stock

current batch

RM BRASS MUSHROOMS

chill cast

typical analysis

60 mm Ø x 5 mm

Number	Zn	Cu	Al	As	Be	Fe	Ni	Mg	Mn	P	Pb	Sb	Si	Sn
CTIF L 7	42.45	55.6	0.308	.	.	0.031	0.020	.	0.62	.	0.71	.	0.13	0.038
CTIF L 1-1	39.7	59.60	0.015	.	.	0.017	0.106	.	.	0.080	0.062	.	0.36	0.046
CTIF L 2	35.55	61.55	0.485	.	.	0.216	0.71	.	0.350	.	0.408	.	0.202	0.48
CTIF L 4-1	34.55	61.75	0.100	.	.	0.466	0.227	.	0.109	.	2.017	.	0.12	0.693
CTIF L 3	32.70	62.35	0.91	.	.	0.36	0.90	.	0.205	.	1.02	.	0.034	1.50
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 mmPB: 45 mm Ø x 25 mm
others: chill cast ~40-43 mm Ø x ~15-18 mm

#	Number	Zn	Cu	Al	As	Bi	Fe	Mn	Ni	Pb	Sb	Si	Sn
1	31X B1Q	44.82	54.99	(0.001)	0.0070	0.0183	0.0223	0.0079	0.0200	0.0155	0.0075	(0.007)	0.0279
1	31X B18K	39.41	59.37	0.0193	0.0215	0.0196	0.0237	0.0207	0.0233	1.018	0.0205	0.019	0.0117
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 TB3L	37.0	62.42	0.044	0.047	0.0085	0.040	0.034	0.031	0.118	0.053	0.020	0.133
1	31X B11H	36.65	60.72	0.0262	0.0061	0.0054	0.802	0.653	1.033	0.0134	0.0057	0.0063	0.0117
1	31X B10M	36.05	60.18	0.358	0.0087	0.0215	(1.39)	0.205	1.475	0.0274	0.0124	0.0389	0.0310
1	31X TB5B	35.6	61.49	0.071	0.396	0.292	0.094	0.283	0.106	0.575	0.229	0.111	0.129
1	31X B3N	35.05	64.56	.	0.0104	0.0152	0.0408	0.0290	0.0171	0.085	0.0148	.	0.0394
1	31X B3M	35.01	64.58	0.074	0.0196	0.0149	0.0264	0.0296	0.0259	0.0299	0.0205	.	0.0202
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 B26F	30.30	62.93	1.005	0.126	0.106	0.649	0.408	1.396	0.930	0.098	0.252	1.476
1	31X B21E	29.55	69.32	0.0244	0.0908	0.104	0.126	0.0603	0.117	0.113	0.105	0.059	0.101
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 B6K	19.93	79.90	0.0010	0.0009	0.0010	0.0097	0.0039	0.0066	0.0122	0.0011	0.015	0.0029
1	31X B7L	15.34	84.22	0.0435	0.0054	0.0607	0.099	0.0088	0.0351	0.0416	0.0196	0.018	0.089
1	SRM 1110	15.2	84.5	.	.	.	0.033	.	0.053	0.033	.	.	0.051
1	SRM 1111	12.8	87.1	.	.	.	0.010	.	0.022	0.013	.	.	0.019
1	31X B8J	10.23	89.37	(0.001)	0.0074	0.030	0.132	0.0006	0.0421	0.082	0.0254	(0.002)	0.0311
1	31X B23D	9.97	89.57	0.0048	0.0482	0.0463	0.060	0.0053	0.047	0.046	0.0448	0.0046	0.060
1	31X B9L	3.83	96.05	(0.0005)	0.0053	0.0068	0.0168	0.0017	0.0129	0.0549	0.0075	0.0036	0.0245
1	31X B24D	1.99	95.65	(0.0024)	0.0116	0.0126	0.0342	0.0030	0.134	0.050	0.118	.	1.93
2	PB MS10	.	84.26	.	0.014	0.37	0.28	0.016	0.025	0.020	(0.009)	0.12	0.052
1	BAM M396	.	65.49	0.223	0.0590	0.00032	0.0235	0.00445	0.0143	.	0.00061	.	.

#	Number	Zn	Cu	Al	As	Bi	Fe	Mn	Ni	Pb	Sb	Si	Sn
	Number	B	C	Cd	Co	Cr	Hg	P	S	Se			
	31X B1Q	0.0007	.	0.0018	0.0015	0.0091	.	0.0385	.	.			
	31X B18K	Ag:0.0143	.	0.0254	0.0015	(0.013)	.	0.0195	Te:0.017	.			
	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 TB3L	0.0014	.	0.0078	0.0043	.	.	Ag:0.011	Te:0.0025	.			
	31X B11H	.	.	.	.	.	.	.	.	.
	31X B10M	.	.	.	0.0390	0.0192	.	.	.	.
	31X TB5B	Ag:0.216	.	0.49	0.0202	0.0031	.	0.0255	.	.			
	31X B3N	0.0008	.	0.0027	0.0066	Te: 0.0056	.	0.0366	Ag:0.0152	.			
	31X B3M	0.0022	Ag:0.0247	0.0040	0.0109	.	.	0.0421	Te:0.0098	.			
	31X TB4G	(0.0004)	.	0.0032	0.0067	.	.	.	Te:0.0035	.			
	31X B26F	.	Ag:0.053	0.0147	0.1197	.	.	0.0593	.	Te:(0.009)			
	31X B21E	.	.	.	.	.	.	0.1269	(0.002)	Te:0.0353			
	31X B5L	(0.0009)	.	0.0040	0.0250	.	.	.	.	.
	31X B6K	0.0023	.	0.0037	0.0063	<0.0005	.	.	.	.
	31X B7L	0.0013	.	0.0064	0.0044	Te:(0.002)	.	.	.	.
	SRM 1110	.	.	.	.	.	.	.	.	.
	SRM 1111	.	.	.	.	.	.	.	.	.
	31X B8J	.	.	0.0155	0.0072	(0.0005)	.	0.0026	0.045	.			
	31X B23D	.	.	0.0010	0.0472	.	.	0.030	0.053	.			
	31X B9L	(0.0003)	.	.	.	.	.	.	.	.		0.0029	
	31X B24D	.	.	0.0008	.	.	.	0.0065	0.050	.			
	PB MS10	.	.	.	.	.	.	.	.	.
	BAM M396	.	.	0.00022	0.00012	0.00079	.	0.00089	.	<0.001			38 mm Ø x 30 mm

Number	B	C	Cd	Co	Cr	Hg	P	S	Se
--------	---	---	----	----	----	----	---	---	----

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	1.96	1.88		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

available in SET/4 only

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

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

~40 mm Ø x ~15 mm

Number	Bi	Zn	Cu	Al	As	B*	Cd*	Co	Fe	Mn	Ni	P	Pb	S*	Sb	Se*	Si	Sn
31X BIB3C	4.04	31.83	63.18	0.154	0.0476	.	14	0.0032	0.0510	.	0.127	0.0626	0.181	18	0.0321	47	0.0516	0.198
31X BIB2E	1.031	35.01	61.12	0.504	0.0224	.	55	0.0437	0.143	.	0.550	0.0232	0.118	<10	0.087	27	0.151	1.267

RM CARTRIDGE BRASS

cast typical analysis listed in mass %

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
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 CARTRIDGE BRASS SET

available in SET/5 only

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	0.0029	0.0010	0.0670	0.0088	0.0037	0.0260	65.93	0.0170	0.0350	0.2600	0.0160	0.0065	0.0034	0.0004	0.0740	0.1400	0.0004
IMN MH2	0.0110	0.0190	0.0410	0.0015	0.0022	0.0180	68.25	0.0270	0.0110	0.2200	0.0055	0.0210	0.0055	0.0240	0.0540	0.0970	0.0015
IMN MH3	0.0065	0.0081	0.0160	0.0003	0.0011	0.0089	71.28	0.0810	0.0850	0.1000	0.0035	0.0780	0.0090	0.0130	0.0310	0.0240	0.0046
IMN MH4	.	0.0027	0.0011	0.0045	0.0006	0.0029	69.94	0.1300	0.0017	0.0520	0.0022	0.3300	0.0043	0.0170	0.0160	0.0110	0.0035
IMN MH5	0.0250	0.0140	0.0038	0.00004	.	0.0012	72.87	0.1900	0.0720	0.0072	0.0011	0.2000	0.0180	0.0035	0.0039	0.0021	0.0047

CRM CARTRIDGE BRASS SETS 40 mm Ø x ~28 mm

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

available in SETs only, as grouped

CRM FREE CUTTING BRASS SET available in SET/5 only 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
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
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
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
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

LEADED BRASS

= class, where 1 = CRM and 2 = RM

* Provisional Analysis

#	Number	Pb	Sn	Zn	Cu	Al	As	Bi	Co	Fe	Mn	Ni	P	Sb	Si
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	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	31X 7835-8B	3.22	0.451	21.55	72.7	0.219	0.151	0.101	0.313	0.0446	0.0102	0.157	0.154	0.110	.
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	31X CZ121A	3.01	0.1940	38.57	57.84	0.0034	0.0299	0.0046	.	0.167	0.0052	0.1028	0.0028	0.0050	(0.0030)
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	IARM 73C	2.97	0.256	35.1	61.3	(0.001)	(0.005)	0.011	(0.002)	0.199	(0.003)	0.095	(0.003)	0.008	(0.003)
1	BAM 375	2.90	0.2090	38.02	58.32	0.0270	0.0231	0.00686	0.01964	0.207	0.0222	0.1053	(0.00086)	0.0122	0.0211
1	BS 360C *	2.8	0.11	35.3	61.6	0.02	0.004	.	.	<0.005	0.099	0.003	0.019	0.011	0.005
1	31X 7835-1U	2.78	0.446	33.42	62.90	0.0187	0.0138	0.0089	0.0091	0.173	0.0105	0.120	0.049	0.0156	0.021
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	BS 360D *	2.7	0.15	35.1	61.8	<0.005	0.009	.	<0.005	0.16	0.001	0.029	0.002	0.007	<0.005
1	31X 7835-7A	2.29	0.137	7.50	88.87	0.0084	.	0.048	0.0120	0.030	.	0.943	0.080	0.0327	0.039
1	31X 7835-2K	2.07	0.152	32.94	64.49	0.0060	0.0280	0.0099	0.0290	0.0309	.	0.0462	0.0226	0.0358	0.0193
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)
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	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	31X 7835-5A	1.64	0.116	6.23	91.25	0.078	0.104	.	.	0.126	.	0.249	0.018	0.114	.
1	31X CZ122A	1.31	0.70	37.2	59.9	0.527	0.0069	0.0047	0.0059	0.118	.	0.061	0.038	.	0.004
1	31X CZ114A	1.219	0.511	38.25	57.10	0.714	.	0.0107	.	0.740	1.475	0.0183	0.0018	(0.0032)	(0.0064)
1	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	0.039	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 7835-9B	1.045	1.60	16.26	76.6	0.119	0.101	0.91	0.113	0.191	0.0045	0.196	0.0627	0.44	0.0471
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	Ag	B	Be	C	Cd	Cr	Mg	O	S	Se	Te	Units
IMN BR1	.	.	.	.	.	.	.	.	0.014	.	.	40 mm Ø x ~25 mm
SRM 1124	0.0131	.	.	.	0.00651	0.0155	.	.	(0.0031)	.	.	cont. cast 39 mm Ø x 19 mm
31X 7835-8B	0.549	.	.	.	0.0944	.	.	.	.	.	0.101	chill cast ~40 mm Ø x ~15 mm
CURM H30.24	.	.	.	.	.	.	.	(0.2)	.	.	.	50 mm Ø x 10 - 12 mm
31X CZ121A	0.0060	.	.	.	.	(0.0002)	.	.	.	.	.	wrought ~41 mm Ø x ~15 mm
33X RB2B	0.105	.	.	.	.	(0.0013)	.	.	0.069	.	0.0078	chill cast ~42 mm Ø x ~17 mm
IARM 73C	(0.006)	(0.0004)	.	(0.003)	0.0014	0.001	(0.001)	(0.0003)	(0.002)	.	.	31 mm Ø x 2 mm
BAM 375	0.0166	.	.	.	0.00859	.	.	.	.	.	0.00538	wrought 40 mm Ø x 30 mm
BS 360C *	<0.005	.	<0.005	0.001	.	<0.005	<0.005	<0.005	<0.05	.	.	38 mm Ø x ~7 or 19+ mm
31X 7835-1U	0.0083	.	.	.	0.0037	0.0028	.	.	.	.	0.0015	chill cast ~40 mm Ø x ~15 mm
BS 360B	0.006	.	(<0.001)	(<0.002)	.	(0.0001)	.	0.0007	(<0.0005)	.	(<0.002)	38 mm Ø x ~7 or 19+ mm 17025
BS 360D *	<0.005	.	<0.005	0.001	.	<0.005	<0.005	<0.005	<0.05	.	.	38 mm Ø x ~7 or 19+ mm
31X 7835-7A	.	.	.	.	0.0047	.	.	.	0.0075	.	.	chill cast 40 mm Ø x ~15 mm
31X 7835-2K	0.0102	0.0023	.	.	0.0020	.	.	.	.	.	.	chill cast ~40 mm Ø x ~15 mm
31X CZ132A	0.0050	.	.	.	0.0012	.	.	.	0.0008	.	.	wrought ~40 mm Ø x ~15 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
31X 7835-3K	0.0205	.	.	.	0.0060	0.0107	.	.	.	.	0.0011	chill cast ~40 mm Ø x ~15 mm
31X 7835-5A	.	.	.	.	.	.	.	.	.	.	.	chill cast 42 mm Ø x 18 mm
31X 7835-6D	0.0048	0.0032	.	.	0.0017	.	.	.	(0.001)	(0.001)	0.0007	chill cast ~40 mm Ø x ~15 mm
31X CZ114A	.	.	.	.	.	.	.	.	.	.	.	wrought ~38 mm Ø x ~15 mm
BS 857B-1	(0.002)	.	.	.	.	.	.	.	.	.	.	cont. cast 38 mm Ø x 12 mm
BS 857B-2	(0.002)	.	.	(0.003)	.	.	.	.	(0.001)	.	(0.004)	cont. cast 38 mm Ø x 12 mm
BS 857B-3	(0.002)	.	.	(0.003)	.	.	.	.	(0.001)	.	(0.004)	cont. cast 38 mm Ø x 12 mm
BS 857B-4	(0.002)	.	.	(0.003)	.	.	.	.	(0.001)	.	(0.004)	cont. cast 38 mm Ø x 12 mm
31X CZ115A	0.0041	.	.	.	.	0.0005	.	.	.	.	.	wrought ~41 mm Ø x ~15 mm
31X 7835-9B	2.014	.	.	.	0.0586	.	.	.	0.0200	0.300	.	chill cast ~40 mm Ø x ~15 mm
31X CZ112A	0.0043	.	.	.	.	.	.	.	.	.	.	wrought ~41 mm Ø x ~15 mm

CRM LEADED BRASS SET available in SET/5 only 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
IMN WG2	(0.00095)	0.016	56.99	0.42	(0.0024)	0.0051	.	2.66	(0.0024)	(0.021)	(0.0025)	Rem
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
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
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

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 MNB11B	12.50	21.21	59.24	1.204	0.420	4.71	0.345	0.0545	0.199	0.0060	0.0636	0.0380	0.0073	.	51	12	.
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 MNB2D	2.08	31.30	63.75	0.272	0.548	0.118	0.983	0.579	0.289	0.0201	0.0086	0.0246	0.0177	410	.	.	.
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 MNB5R	0.175	37.11	55.14	3.24	0.898	1.32	0.157	0.528	1.228	0.0021	0.066	0.0399	(0.006)	195	.	.	116

CRM MANGANESE BRASS DISC AND ROD SETS
available in SETS ONLY, as grouped IMN MA: 10 mm Ø x 100 mm IMN WF: 44 mm Ø x 30 mm

Number	Al	As	Bi	Cu	Fe	Mn	Ni	P	Pb	Sb	Si	Sn	Zn
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
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
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
IMN MA4	0.33	.	.	57.40	0.20	2.75	0.69	0.15	.	0.20	0.27	0.015	Rem
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
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
IMN WF1	.	.	0.00059	56.47	0.097	2.16	0.010	(0.0012)	0.010	0.00058	.	0.012	Rem
IMN WF2	.	.	0.00091	57.66	0.21	1.79	0.040	(0.0032)	0.040	0.0018	.	0.045	Rem
IMN WF3	.	.	0.0015	58.66	0.29	1.36	0.10	0.0075	0.070	0.0036	.	0.072	Rem
IMN WF4	.	.	0.0021	60.50	0.42	0.57	0.15	0.0095	0.10	0.0045	.	0.11	Rem
IMN WF5	.	.	0.0030	58.77	0.68	0.52	0.18	0.014	0.14	0.0061	.	0.16	Rem
IMN WF6	.	.	0.00095	59.78	0.05	0.98	0.074	0.0020	0.026	.	.	0.028	Rem

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 74: 31 mm Ø x 18 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	CURM 42.24	2.25	0.91	33.75	62.45	0.067	0.065	0.054	0.066	0.065	0.025	0.226	0.012	0.060	0.093	.	.	.
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	.	.	.
1	31X NB 4J7	2.01	0.067	32.57	63.71	0.178	0.0062	0.104	0.235	0.0053	0.230	0.230	(0.0032)	0.450	0.203	.	0.0009	.
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	31X NB 2H	1.009	0.239	35.47	62.21	0.168	0.0970	0.100	0.112	0.151	0.0578	0.139	0.0019	0.099	0.107	.	.	.
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 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 *	0.73	1.4	36.1	[61.7]	0.002	<0.005	.	0.017	0.002	0.002	0.002	<0.005	0.011	0.001	*	Provisional Analysis	.
1	IARM 74B	0.70	0.017	38.9	60.4	0.003	<0.01	.	0.011	<0.01	0.006	(0.008)	(0.003)	0.003	0.003	.	.	.
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)
1	IARM 74A	0.50	0.02	38.14	.	<0.01	.	.	0.01	<0.01	0.01	0.006	0.001	<0.01	.	.	.	.

BS 464B is 17025

CRM NAVAL BRASS SET available in SET/5 only 40 mm Ø x 25 mm

Number	Al	Bi	Cu	Fe	Mn	Ni	P	Pb	Sb	Si	Sn	Zn
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
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
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
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
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

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

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

SILICON BRASS

= class, where 1 = CRM and 2 = RM

Number	Si	Zn	Cu	Al	Fe	Mn	Ni	P	Pb	Sb	Sn
2 CTIF LS2	4.91	11.60	79.60	0.156	1.022	0.220	1.110	0.064	0.886	0.0103	0.338
1 ERM-EB393a	3.35	(20.8)	75.8	0.00021	0.0143	0.00185	0.00297	0.0454	0.0104	(0.000093)	0.00390
2 CTIF LS3	3.3	19	76	0.43	0.10	0.15	0.11	0.011	0.58	0.107	0.15
1 31X WSB6F	3.13	0.0506	95.40	(0.0013)	0.158	0.924	0.0509	0.0179	0.0310	0.0406	0.0142
1 IARM 313A	3.09	21.3	75.4	(0.001)	0.011	(0.001)	(0.002)	0.09	0.042	0.014	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 313A	0.0017	0.0010	0.0008	(0.002)	(0.0003)	(0.004)	(0.001)	0.0016	(0.0004)	31 mm Ø x 2 or 18 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
31X HT37A	60.33	34.69	0.0004	0.0344	2.88	1.38	0.0011	0.003	0.0105	0.003	0.623	<0.0005	0.0007	0.0116	40 mm Ø x 18 mm
31X HT38A	58.77	36.66	0.960	0.0530	2.60	0.869	0.0008	0.003	0.0242	0.0024	0.051	(0.001)	(0.0006)	0.039	50 mm Ø x 18 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
SRM C1115	87.9	0.13	0.074	0.005	0.013	0.10	11.7	cast	31 mm x 31 mm x 19 mm
SRM 1116	90.3	0.046	0.048	0.008	0.042	0.04	9.4	wrought	31 mm Ø x 19 mm
SRM 1117	93.0	0.014	0.020	0.002	0.069	0.02	6.8	wrought	31 mm Ø x 19 mm
SRM C1117	93.0	0.014	0.020	0.002	0.069	0.02	6.8	cast	31 mm x 31 mm x 19 mm

CRM ALUMINUM BRONZE SETS

available in SETS only, as grouped

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

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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
IMN BJ1	2.88	0.011	0.013	0.016	0.027	.	0.011	58	0.60	6.97	0.0022	0.0025	0.021	0.0012	(0.11)	(0.11)	0.020
IMN BJ2	2.46	0.0089	0.0095	0.011	0.020	.	0.038	98	0.42	6.47	0.011	0.0043	0.014	0.0030	(0.091)	(0.080)	0.038
IMN BJ3	1.97	0.0072	0.0071	0.0076	0.014	.	0.12	65	0.21	5.87	0.014	0.0081	0.0082	0.0056	(0.047)	(0.049)	0.22
IMN BJ4	1.50	0.0031	0.0042	0.0048	0.0076	.	0.20	35	0.013	5.49	0.013	0.010	0.0049	0.0088	(0.015)	(0.014)	0.36
IMN BJ5	1.09	0.0018	0.0013	0.00075	0.0024	.	0.28	17	0.0030	5.00	0.019	0.017	0.0023	0.010	(0.0071)	(0.0034)	0.51

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	32X ALB9C	13.52	81.64	0.0163	0.0206	3.12	0.090	0.159	0.628	0.096	0.267	0.235	0.0601	0.142
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]	0.005	.	3.02	.	0.17	0.051	0.003	0.002	0.019	0.017	0.011
2	BS 954A	10.17	85.64	(0.006)	.	3.50	.	0.10	0.20	0.012	0.016	0.029	0.033	0.30
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
1	32X CA 7A	9.37	88.06	.	0.0028	2.09	0.0004	0.151	0.234	.	(0.004)	0.017	0.0172	0.006
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
32X ALB9C	0.0417	.	.	0.0027	.	.	.	.	Te:0.0058	~40 mm Ø x ~15 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 *	.	.	0.004	* Provisional Analysis	0.005	0.001	0.004	.	.	44 mm Ø x ~7 or 19+ mm
BS 954A	.	.	0.004	.	.	<0.0001	0.001	.	.	38 mm Ø x 12 mm last
HRT CU2018	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm
VS BR1	.	.	.	.	.	.	.	.	.	38 mm Ø x 18 mm
VS BR4	.	.	.	.	.	.	.	.	.	38 mm Ø x 18 mm
32X CA 7A	0.0009	.	0.0028	0.0003	.	.	.	.	.	42 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)	(0.0005)	(0.0005)	(0.0005)	(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
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

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

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
1	32X ALB 10B	12.11	73.64	0.0194	0.0152	3.63	0.0122	1.626	7.21	0.069	0.152	0.158	0.201	0.961
1	IARM 94B	10.8	80.6	<0.01	0.017	3.99	.	0.071	4.31	0.011	0.004	0.028	(0.003)	0.14
2	CURM 52.52	10.69	79.26	.	0.004	6.02	0.007	0.145	3.56	.	0.074	0.011	0.044	0.094
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 204A	10.55	83.3	(<0.01)	0.008	3.87	.	0.052	1.95	0.007	0.004	0.034	0.005	0.22
1	32X ALB 3S	10.43	80.01	0.0213	0.0392	3.720	0.0659	0.243	3.51	0.0345	0.117	0.155	0.1209	1.313
2	BS 955B	10.30	81.5	(0.002)	.	3.79	.	0.12	4.11	0.017	0.051	0.05	0.024	0.052
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	BS 630A	10.05	81.0	(0.002)	.	3.73	.	0.11	4.81	<0.01	0.0069	0.037	0.019	0.17
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	32X ALB 6K	9.69	80.77	0.0116	(0.1)	2.71	0.0104	0.787	5.42	(0.006)	0.0749	0.073	0.120	0.126
1	VS BR3	9.6	.	.	.	4.00	.	0.227	3.85	(0.003)	0.007	0.071	0.005	0.009
2	C52.55	9.3	Rem	.	0.05	4.9	0.13	1.1	4.6	.	0.14	0.03	0.03	0.10
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	IARM 235A	8.9	81.2	<0.005	0.01	4.07	.	1.17	4.44	0.012	0.012	0.061	0.018	0.083
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 5K	7.21	83.72	.	0.192	2.04	0.179	1.416	3.92	(0.051)	0.0512	0.107	0.0293	0.80
1	32X ALB 13A	7.09	84.96	.	.	1.171	.	5.39	1.381	0.009	(0.0009)	0.086	0.0072	0.0194
1	32X ALB 8E	6.38	77.17	0.145	0.36	5.54	0.015	1.562	6.68	0.171	0.071	0.603	0.312	0.352
1	32X ALB 8F	6.21	77.04	0.189	0.088	5.37	0.194	1.57	6.11	0.261	0.049	0.513	0.435	1.395

#	Number	Al	Cu	As	Cr	Fe	Mg	Mn	Ni	P	Pb	Si	Sn	Zn
	Number	Ag	Be	Bi	C	Co	S	Sb	Se	Units				
	32X ALB 10B	0.0144	.	.	.	0.0984	.	.	Te:0.0108	~40 mm Ø x ~15 mm				
	IARM 94B	0.017	.	.	(0.006)	0.011	0.002	(0.011)	.	31 mm Ø x 2 mm				
	CURM 52.52	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm				
	BS 955C	0.014	.	.	.	.	.	(<0.002)	.	38 mm Ø x ~7 or 19+ mm				
	IARM 204A	0.009	.	.	0.006	0.008	(0.002)	(<0.01)	.	31 mm Ø x 2 mm				
	32X ALB 3S	0.0272	.	.	.	0.0760	.	.	Nb:0.018	~40 mm Ø x ~15 mm				
	BS 955B	(0.009)	.	.	.	.	0.002	(0.002)	.	38 mm Ø x 12 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				
	BS 630A	.	.	.	0.005	.	(0.001)	<0.001	.	38 mm Ø x ~7 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	.	38 mm Ø x ~7 or 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				
	32X ALB 6K	0.0082	.	.	.	0.139	.	.	.	~40 mm Ø x ~15 mm				
	VS BR3	.	.	.	.	.	.	.	.	38 mm Ø x 18 mm				
	C52.55	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm				
	BS CC954	.	.	.	(0.007)	.	(0.002)	0.004	.	32 mm Ø x 17 mm				
	C52.56	.	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm				
	IARM 235A	<0.005	.	.	0.009	0.01	0.002	(0.004)	.	31 mm Ø x 2 mm last				
	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 5K	0.0061	.	.	0.0606	.	Nb:0.181	.	Te:0.047	~40 mm Ø x ~15 mm				
	32X ALB 13A	.	.	.	.	0.0011	.	.	(0.0007)	~35 mm Ø x ~15 mm				
	32X ALB 8E	0.0099	.	.	.	0.554	.	0.024	.	~40 mm Ø x ~15 mm				
	32X ALB 8F	0.0100	.	.	0.0204	0.425	.	0.0250	.	~40 mm Ø x ~15 mm Nb:(0.002) Te:(0.003)				

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 2158-W	11.95	85.00	2.53	0.26	0.10	<0.005	0.015	<0.01	<0.01	.	.	.	.
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 2154-V	11.25	85.00	3.05	0.12	0.41	<0.005	0.015	<0.01	<0.01	.	.	.	.
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

31 mm Ø x 2 mm

Number	Ag	Al	As	Bi	Co	Cr	Cu	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn
IARM 211A	0.005	0.002	(0.01)	5.0	(0.001)	(0.002)	88.4	0.004	(0.003)	0.003	0.19	0.014	0.002	0.057	0.003	6.23	0.006

MANGANESE BRONZE

= class, 1=CRM and 2=RM

BS 675B, 863B, 675A: 38 Ø x ~7 or 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 only

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

PHOSPHOR BRONZE

= class, where 1 = CRM and 2 = RM * Provisional Analysis

#	Number	P	Sn	Zn	Cu	Mn	Ni	Pb	Al	As	Fe	Mg	S	Sb	Si
1	32X PB11H *	0.92	3.2	1.6	Rem	0.04	0.72	1.08	0.07	0.19	0.37	0.015	0.008	0.47	0.085
1	BS 510C *	0.34	5.5	0.13	[93.9]	<0.005	0.016	0.005	<0.05	0.003	0.004	<0.005	0.002	0.006	0.003
1	32X 51000A	0.300	4.85	0.0105	94.87	.	0.0084	0.0032	0.0007	.	0.0024	.	0.0021	.	.
1	32X 54400A	0.243	3.97	3.87	86.79	.	0.244	4.69	0.0009	0.0156	0.072	.	0.0251	0.0362	.
1	32X PB20A	0.196	4.55	0.007	95.22	<0.005	0.0090	0.0045	<0.005	0.0011	0.0013	.	0.0030	0.0012	0.0046
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 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)
1	32X PB13F	0.128	6.34	0.374	92.64	0.0216	0.099	0.075	0.0034	0.0309	0.057	.	.	0.1091	0.0107
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 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	32X PB15A	0.0873	2.21	0.76	96.07	0.125	0.212	0.174	0.045	0.123	0.116	0.0275	.	0.026	0.043
1	32X PB12F	0.076	5.03	0.130	94.16	0.0014	0.205	0.0436	(0.0005)	0.0512	0.053	.	0.0108	0.1822	(0.002)
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	BS 544C *	0.009	4.1	3.7	88.6	<0.005	0.15	3.3	<0.005	0.01	0.055	.	0.057	0.04	0.003
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
1	32X PB10P	0.0030	12.37	0.256	87.14	(0.0004)	0.0130	0.0182	(0.0016)	0.0126	0.0043	.	0.0144	0.0134	(0.0006)

#	Number	P	Sn	Zn	Cu	Mn	Ni	Pb	Al	As	Fe	Mg	S	Sb	Si
	Number	Ag	Bi	C	Co	Cr	N	O	Se	Units					
	32X PB11H *	.	0.025	.	0.035	.	.	.	.	~40 mm Ø x ~15 mm					
	BS 510C *	<0.05	.	0.001	0.001	<0.005	.	<0.005	.	38 mm Ø x ~7 or 19+ mm					
	32X 51000A	0.0022	.	.	.	.	.	.	.	38 mm Ø x ~15 mm					
	32X 54400A	0.0124	.	.	0.0013	.	.	.	.	~38 mm Ø x ~15 mm					
	32X PB20A	.	.	.	.	.	.	.	.	38 mm Ø x 17 mm					
	IARM 78B	.	.	.	.	.	.	.	.	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					
	32X PB13F	0.0196	0.0309	.	0.0091	.	.	.	Te:0.0298	~40 mm Ø x ~15 mm					
	BS 510A	.	.	(0.0006)	.	.	.	.	.	38 mm Ø x 12 mm last of stock					
	CURM 54.02	.	.	.	.	.	.	.	.	50 mm Ø x 10-12 mm					
	32X PB13E	0.0205	0.0224	.	0.0088	.	.	.	.	~40 mm Ø x ~15 mm					
	32X PB15A	.	.	.	0.0509	.	.	.	.	40 mm Ø x ~15 mm					
	32X PB12F	0.0155	0.0647	.	0.0150	.	.	.	.	~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					
	BS 544C *	0.002	.	0.002	0.003	<0.005	.	<0.005	.	38 mm Ø x ~7 or 19+ mm					
	32X PB16A	0.0166	0.0530	.	(0.0004)	.	.	.	Te: (0.002)	~40 mm Ø x ~15 mm					
	32X PB10P	.	0.034	0.0062	.	.	.	.	0.0074	~40 mm Ø x ~15 mm					
	Number	Ag	Bi	C	Co	Cr	N	O	Se	Units					

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

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
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
	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	<0.0005	<0.0005	<0.0005	0.0007	<0.0005	.	38 mm Ø x ~7 or 19 mm 17025				
	IARM 82B	.	.	.	<0.0005	(0.001)	0.003	<0.01	.	31 mm Ø x 2 or 18 mm				
	37X 65500A	0.0014	.	.	.	.	0.0010	.	.	~38 mm Ø x ~15 mm				
	BS 655A	.	.	.	.	(0.0006)	<0.002	.	.	38 mm Ø x 12 mm				

CRM SILICON BRONZE SET

BH1 and BH6 set only, others ok individual

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 SN4B	18.96	0.864	0.496	76.87	0.0513	0.0811	0.0148	0.607	1.208	0.0132	0.143	0.0223
1	32X SN3G	16.14	0.159	0.150	81.7	(0.14)	0.14	0.067	0.464	0.646	0.035	0.362	0.0247
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	32X SN5B	15.90	0.860	0.604	78.97	0.215	1.009	0.528	0.667	.	.	0.702	.
1	32X SN7B	12.4	2.31	1.14	81.21	0.0254	0.036	.	0.276	0.0051	0.027	0.235	.
1	32X SN1F	11.65	5.66	0.259	80.34	(0.0010)	0.0014	(0.0002)	1.931	0.0022	0.0126	0.0274	(0.0006)
2	CURM 50.04	11.30	9.94	0.66	76.11	0.014	0.10	0.028	1.10	0.032	0.14	0.50	0.011
2	HRT CU2000	11.03	0.78	0.42	86.4	(0.001)	0.04	(0.01)	1.28	0.009	0.014	.	(0.01)
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 LB11E	10.19	10.21	0.039	78.72	(0.0004)	0.0034	.	0.498	0.0050	0.0295	0.0680	0.0093
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	.
2	BS CC905	9.68	0.58	2.89	85.4	0.0007	0.048	0.0014	1.51	0.059	0.015	0.011	0.003
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	IARM 89C	9.14	0.17	3.0	87.5	(0.002)	0.004	(0.001)	0.008	0.004	0.0011	0.008	(0.003)
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)
2	CURM 50.01	9.01	11.13	0.91	75.38	<0.0005	0.074	<0.001	1.93	0.069	0.188	0.50	<0.001

#	Number	Sn	Pb	Zn	Cu	Al	Fe	Mn	Ni	P	S	Sb	Si
	Number	Ag	As	Bi	C	Cd	Co	Cr	Mg	Se	Te	Units	
	32X SN4B	0.495	0.0651	0.0150	.	.	0.100	.	.	.	.	~42 mm Ø x ~15 mm	
	32X SN3G	.	0.0323	.	.	.	0.0460	.	.	.	.	~40 mm Ø x ~15 mm	
	CTIF B1	.	.	.	.	.	.	.	.	.	.	60 mm Ø x 5 mm	
	32X SN5B	0.095	0.0557	0.124	.	0.130	0.129	0.0238	.	.	(0.001)	~40 mm Ø x ~15 mm Au: 0.0102	
	32X SN7B	0.328	1.13	0.198	.	0.020	0.339	.	.	0.066	0.0204	~40 mm Ø x ~15 mm	
	32X SN1F	.	0.0111	.	.	.	0.0136	.	.	.	.	~40 mm Ø x ~15 mm	
	CURM 50.04	.	0.06	0.10	.	.	.	.	.	.	.	50 mm Ø x 10-12 mm	
	HRT CU2000	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 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 LB11E	0.0616	0.0408	0.0519	.	.	0.0098	.	.	.	0.0147	~40 mm Ø x ~15 mm	
	BS 937C	(0.015)	0.0112	(0.018)	(0.0015)	(0.0002)	0.0006	(0.00004)	0:0.0060	(0.0008)	(0.0005)	38 mm Ø x 19+ mm 17025	
	32X 93700A	.	.	.	.	.	0.0004	.	.	.	.	~42 mm Ø x ~15 mm	
	BS CC905	.	0.004	0.003	0.003	.	.	.	.	.	.	32 mm Ø x 20 mm	
	IARM 92C	(0.05)	(0.0005)	(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	
	IARM 89C	0.005	0.004	(0.003)	(0.002)	(0.001)	(0.001)	(0.002)	0:0.006	(0.001)	(0.0004)	31 mm Ø x 2 or 18 mm	
	BS 929	(<0.005)	0.0017	(<0.005)	(<0.005)	.	0.0031	(<0.005)	.	0:0.0031	.	51 mm Ø x ~7 or 19+ mm 17025	
	CURM 50.01	0.19	.	0.024	.	.	.	.	.	.	.	50 mm Ø x 10 - 12 mm	

Number	Ag	As	Bi	C	Cd	Co	Cr	Mg	Se	Te	Units
--------	----	----	----	---	----	----	----	----	----	----	-------

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

= class, where 1 = CRM and 2 = RM

#	Number	Sn	Pb	Zn	Cu	Al	Fe	Mn	Ni	P	S	Sb	Si
1	BS 903E	8.63	0.100	4.11	87.0	(0.001)	0.0072	.	0.293	0.056	0.0092	0.010	(0.0018)
1	BS 903D	8.55	0.101	4.14	86.7	(0.0001)	0.0058	.	0.284	0.059	0.0090	0.0121	(0.0003)
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	32X LB10G	8.29	12.60	0.110	77.10	(0.0005)	0.0011	.	0.690	0.0034	0.0100	0.599	.
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	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	IARM Cu932-18	6.82	7.95	3.44	81.2	(0.0007)	0.070	.	0.454	0.040	0.031	0.31	.
1	32X SN6B	6.78	1.644	2.00	85.73	(0.001)	0.059	0.090	0.295	.	.	0.304	.
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 932F	6.30	7.32	3.39	[82.1]	(0.0008)	0.057	(0.0002)	0.388	0.0105	0.0368	0.199	0.0011
1	BS 932H *	6.3	7.6	2.9	[82.2]	0.002	0.02	<0.005	0.42	0.10	0.038	0.18	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 *	6.00	7.5	0.77	85	0.001	0.015	.	0.63	0.03	0.07	0.085	0.01
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 LB14G	5.63	15.42	0.586	77.01	0.0006	0.0094	0.0005	0.254	0.0589	0.0176	0.0750	(0.0007)
1	32X LB16A	5.55	18.78	0.450	74.42	(0.0012)	0.0040	.	0.793	(0.0018)	0.0011	(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 *	4.9	5.0	4.8	[84.7]	0.002	0.025	<0.05	0.37	0.09	0.040	0.11	0.003
1	BS 836C *	4.8	4.8	4.9	[84.8]	0.002	0.02	<0.05	0.37	0.07	0.037	0.11	0.003
1	BS 836B *	4.8	4.7	4.8	[85.1]	0.002	0.02	<0.05	0.37	0.09	0.038	0.10	0.004
1	32X LB15F *	4.5	20.5	0.16	Rem	<0.005	<0.005	.	0.10	0.08	0.005	0.19	<0.005
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)

Number	Ag	As	Bi	C	Cd	Co	Cr	Mg	Se	Te	Units
BS 903E	.	(0.002)	.	(0.002)	.	(0.002)	(0.0007)	N:(0.0004)	O:(0.007)	.	38 mm Ø x ~7 or 19+ mm
BS 903D	(0.006)	0.0014	(0.004)	(<0.005)	.	(0.0009)	.	O: 0.0011	(0.0006)	(0.001)	38 mm Ø x 19 mm <u>17025</u>
C50.03	.	0.094	0.027	.	.	.	.	.	.	.	50 mm Ø x 10-12 mm
32X LB10G	0.0686	0.169	0.093	.	.	0.084	.	.	.	.	~40 mm Ø x ~15 mm
BS 903B	.	0.003	.	(0.0004)	.	.	.	.	.	.	38 mm Ø x ~7 mm last
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	0:0.0026	0.0045	N:(0.0001)	(0.0025)	.	(0.003)	(0.00004)	.	.	Ti:(0.00006)	50 mm Ø x 19+ mm <u>17025</u>
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
32X SN6B	1.007	0.804	0.127	Au:0.0027	0.0242	0.750	0.015	.	.	.	~40 mm Ø x ~15 mm
IARM 91E	0.015	0.008	0.109	(0.003)	0.0011	0.0024	(0.0008)	.	0.004	.	31 mm Ø x 2 or 18 mm
BS 932G	.	0.0096	.	(0.011)	.	0.0025	(0.001)	.	O:0.0014	.	38 mm Ø x ~7 or 19+ mm <u>17025</u>
BS 932F	.	0.0091	.	(0.0053)	.	O:0.0025	.	.	.	.	38 mm Ø x ~7 or 19+ mm <u>17025</u>
BS 932H *	.	0.01	.	<0.05	.	0.003	.	*	Provisional Analysis	.	31 mm Ø x 2 or 18 mm
IARM 184A	(0.01)	0.010	(0.03)	(0.004)	.	(0.001)	(0.001)	.	.	.	31 mm Ø x 2 or 18 mm
32X LB13D *	0.03	0.115	0.057	.	0.002	0.005	.	*	Provisional Analysis	.	~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 LB14G	0.120	0.0500	0.720	.	.	0.089	.	.	.	.	~40 mm Ø x ~15 mm
32X LB16A	0.0016	.	0.0120	.	.	.	.	.	.	.	32 mm Ø x 17 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 *	<0.5	0.008	<0.5	0.005	.	<0.005	.	*	Provisional Analysis	.	44 mm Ø x ~7 or 19+ mm
BS 836C *	<0.5	0.008	<0.5	0.005	.	<0.005	.	*	Provisional Analysis	.	44 mm Ø x ~7 or 19+ mm
BS 836B *	<0.5	0.008	<0.5	0.006	.	<0.005	.	*	Provisional Analysis	.	44 mm Ø x ~7 or 19+ mm
32X LB15F *	0.038	0.015	0.12	.	.	<0.005	.	*	Provisional Analysis	.	~40 mm Ø x ~15 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

17025
last
17025
17025



CRM LEADED, TIN, AND LEADED TIN BRONZE DISC AND ROD SETS

available in SETS ONLY, as grouped

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	0.15	0.14	0.12	.	.	.	Rem	0.42	.	0.26	2.41	0.70	6.97	(0.011)	0.58	0.23	3.19	3.55
IMN BI2	0.077	0.11	0.070	.	.	.	Rem	0.31	.	0.15	1.46	0.59	5.39	(0.0055)	0.43	0.13	4.18	5.73
IMN BI3	0.034	0.052	0.028	.	.	.	Rem	0.17	.	0.082	0.29	0.32	4.52	(0.003)	0.24	0.075	5.01	7.16
IMN BI4	0.0020	0.010	0.0030	.	.	.	Rem	0.083	.	0.025	0.088	0.029	3.82	(0.002)	0.075	0.014	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	Te	Cr
110	BS 110B	99.94	<0.0002	0.0005	<0.0001	<0.0002	0.00052	<0.0004	<0.0002	<0.0003	<0.0001	0.0007	<0.0006	0.00030	<0.0005	<1ppm	<1ppm	0: 0.0363	
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)	0: 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	0: 0.0007	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	(0.006)	(0.002)	<0.002	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	(0.002)	(0.002)	<0.002	<0.0005	<0.002				
630	BS 630A	81.0	10.05	3.73	0.11	4.81	0.0069	0.037	0.019	0.17	(0.002)	0.005	<0.01	(0.001)	<0.001				
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 675A	58.5	<0.002	1.12	0.32	0.019	0.074	(0.005)	0.80	39.1	<0.002	(0.0007)	0.010	(0.0005)	0.0011				
706	BS 706A	87.60	(0.002)	1.30	0.66	10.18	0.008	<0.005	0.011	0.13	0.003	(0.0007)	0.006	0.012	0.0006				
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 863A	64.1	5.21	2.41	3.00	0.29	0.022	0.034	0.013	24.8	0.010	0.003	(0.007)	<0.0005	0.003				
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	0: 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 954A	85.64	10.17	3.50	0.10	0.20	0.016	0.029	0.033	0.30	(0.006)	0.004	0.012	<0.0001	0.001				
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	ALLOY	ISO?	NUMBER	ALLOY	ISO?	NUMBER
110	17025	BS 110B	642	17025	BS 642C	932		IARM 91E
110	17025	BS 110C	642	17025	BS 642D	932		IARM Cu932-18
110		IARM 70C	642		IARM 81B	932 MOD		CTIF B23
122.2		CURM 09.03	642		IARM Cu648-18	936	17025	BS 936
125		CURM 09.02	655		37X 65500	936		CTIF B31
145	17025	BS 14500	655		BS 655A	937		32X 93700
145	17025	BS 14500A	655	17025	BS 655B	937	17025	BS 937C
145		IARM 278A	655	17025	BS 655C	937		CURM 50.02
172		BS 172Be-1	655		IARM 82B	937		IARM 92C
172		BS 172Be-2	673		31X HT37	938		BS 938-1
172		CTIF 4872	674		31X HT38	941		IARM 184A
172		IARM Cu172-18	675		BS 675	945 MOD		CTIF B32
173.0		36X CBC4	675		BS 675A	947		IARM 267A
175	17025	BS 17500	675	17025	BS 675B	952.2		CTIF 2152-S
180		36X 274	675		IARM 83B	953		CTIF CA3
181.50	17025	BS 18150	687		BAM 368	954		BS 954A
181.50	17025	BS 18150A	693		IARM 313A	954		BS 954B
181.55		36X CCR1	697		CTIF L3	954		BS 954C
182		IARM 279A	702.6		37X 218	954		BS CC954
240		C30.07	706		36X 70600A	954		IARM Cu954-18
260		C48.06	706		BS 706	954 MOD		IARM 204A
260		CURM 48.04	706		BS 706A	955		BS 955B
261.3		C48.03	706		BS 706B	955		BS 955C
274		C38.06	706	17025	BS 706C	955		IARM 94B
274		C38.06-1	706		CTIF CuNi 10	955 MOD		CTIF CA10
280		C30.03	706		IARM 84C	955.1		IARM 334A
280		C30.12	706		HRT CU2014	955.1		IARM 334B
314		IARM 72B	710		36X CN3	955.1 MOD		CTIF CA22
316		31X 7835-7	713		BAM 389	956		32X CA12
360	17025	BS 360B	715		36X 71500	958		IARM 235A
360		BS 360C	715		BS 715A	964		IARM 236A
360		BS 360D	715		IARM 85C	976		IARM 298A
360		IARM 73C	715		IARM Cu715-18	Coinage Alloy		36X CN21
360		SRM 1124	715		SRM 1276a	Coinage Alloy		36X CN23
370		31X B18	762		34X NS2	Cu IX		SRM C1252a
371		C30.22	767		C65.28	Cu VIII		SRM C1251a
464		BS 464A	770		34X NS5	Cu X		SRM C1253a
464	17025	BS 464B	798.3		34X 79830	Envirobrass 2-1		IARM 226A
464		IARM 74A	815		IARM 158B	Envirobrass 2-2		IARM 227A
464		IARM 74B	815		IARM 158C	Envirobrass 2-3		IARM 228A
482		BS 482A	836		BS 836B	Federalloy I-836		IARM 265A
482		IARM 75B	836		BS 836C	Federalloy I-844		IARM 264A
482		IARM 75C	836		BS 836D	Federalloy I-848A		IARM 263A
485		BS 485a	836 + Al		IMN BR1	Federalloy III-932		IARM 266A
485		IARM 76D	838		33X GM8	Hiduron 130		IARM CuH130-18
485		IARM Cu485-18	855		31X TB3	Hiduron 191		IARM CuH191-18
486		IARM Cu486-18	855		C38.01	NARloy-A		IARM 159A
510		32X PB20	855		C38.02	NARloy-Z		IARM 160A
510		32X 51000	855		C38.03	Spinodal Alloy		36X SP1
510		BS 510A	855		C38.04	Spinodal Alloy		36X SP2
510	17025	BS 510B	855		C38.05			
510		BS 510C	857		BS 857B-1			
510		IARM 77B	857		BS 857B-2			
512		32X 92100	857		BS 857B-3			
521		32X 52100	857		BS 857B-4			
521		HRT CU2016	862		CTIF LH7			
524		C11.04	863	17025	BS 863B			
544		33X 54400	863		IARM 88C			
544	17025	BS 544B	873		31X WSB6			
544		BS 544C	893.2, Magnolia B		IARM 211A			
544		IARM 78B	902		BAM 377			
544		IARM Cu544-18	903		BS 903B			
544 MOD		BS 544c	903	17025	BS 903D			
610 MOD		31X B17	903	17025	BS 903E			
614		32X 61400	903		IARM 89C			
615.5		36X CN22	905		BS 905A-1			
622		CTIF 2154-V	905		BS 905A-2			
623		32X CA7	905		BS 905A-3			
623		BS 623	905		BS 905A-4			
623		BS 623A	905		BS CC905			
623		IARM 79B	907		IARM 310A			
623		IARM 79C	910 MOD		CTIF B1			
624		32X ALB3	922		BS 922B-1			
624		BS 624	922		BS 922B-2			
624		C52.51	922		BS 922B-4			
624		CTIF 3011-G	922		BS 922B-5			
624		CTIF CA21	927.1		32X SN1			
630		BS 630A	929	17025	BS 929			
630	17025	BS 630B	931 MOD		C71.34			
630	17025	BS 630C	932	17025	BS 932F			
630		IARM 80D	932	17025	BS 932G			
642	17025	BS 642B	932		BS 932H			

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

The best efforts have been made in the construction of this chart. Some samples do not perfectly fit the alloy specifications, but are considered acceptable for the purposes of calibration and type standardization.

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+Al, Cd<0.0010	>99.95																				
103	Cu = Ag+Al, Cd<0.0010	>99.95						0.001-0.005														
104	Cu = Ag+Al, Cd<0.0010	>0.027																				
105	Cu = Ag+Al, Cd<0.0010	>0.034																				
107	Cu = Ag+Al, Cd<0.0010	>0.085						0.005-0.012														
108	Cu = Ag+Al+P	>99.95																				
109.1	Cu = Ag+Al, Cd<0.005																					
109.2	Cu = Ag+Al, Cd<0.02	>99.90																				
109.3	Cu = Ag+Al, Cd<0.02	>0.044																				
109.4	Cu = Ag+Al, Cd<0.02	>0.085																				
110	Cu = Ag+Al	>99.90																				
110.1	Cu = Ag+Al	>99.90																				
110.2	Cu = Ag+Al	>99.90																				
110.3	Cu = Ag+Al	>99.90																				
110.4	Impurity Limits, O 0.010-0.065	>99.90	<0.0025		<0.0010	<0.0005	<0.0010		<0.0005	<0.0015	<0.0004		<0.0005	<0.00010	<0.0005							
111	Cu = Ag+Al	>99.90																				
113	Cu = Ag+Al	>0.027																				
114	Cu = Ag+Al	>0.034																				
115	Cu = Ag+Al	>0.054																				
116	Cu = Ag+Al	>0.085						<0.04														
117	Cu = Cu+P, B 0.004-0.020	>99.90																				
119.04		>99.90	>0.027																			
119.05		>99.90	>0.034																			
119.06		>99.90	>0.054																			
119.07		>99.90	>0.085					0.004-0.012														
120		>99.90						0.005-0.012														
121		>99.90	>0.014					0.015-0.040														
122		>99.90						0.015-0.025														
122.1		>99.90						0.040-0.065														
122.2		>99.90						0.015-0.040														
123		>99.90						>0.03	<0.004													
125	Cu=Ag+Al, Te=Se <0.025	>99.88			<0.05		<0.050		<0.004													
125.1	Cu=Ag+Al, Te=Se <0.025	>99.90					<0.050		<0.003													
127	Cu=Ag+Al, Te=Se <0.025	>99.98	>0.027				<0.050		<0.004													
128	Cu=Ag+Al, Te=Se <0.025	>99.88	>0.034				<0.050		<0.004													
129	Cu=Ag+Al, Te=Se <0.025	>99.88	>0.054				<0.050		<0.004													
130	Cu=Ag+Al, Te=Se <0.025	>99.88	>0.085				<0.050		<0.004													
131	Cu = Ag+Al	>99.80																				
141	Cu = Ag+Al	>99.40													0.15-0.50							
141.8	Cu = Ag+Al	>99.90		<0.01				<0.075	<0.02													
141.81	Cu=Ag+Al, C<0.005, Cd<0.002	>99.90						<0.002	<0.002					<0.002								
142	Cu = Ag+Al	>99.40						0.015-0.040							0.15-0.50							
142.1	Cu = Ag+Al	>99.20						0.013-0.050							0.30-0.50							
143	Cu = Ag+Al+Al, Cd 0.05-0.15	>99.90																				
143.1	Cu = Ag+Al+Al, Cd 0.10-0.30	>99.90																				
144	Cu=Ag+Al+Al+P, Te=Se <0.02	>99.90			<0.03		<0.05	0.013-0.025														
144.1	Cu = Ag+Al+Al	>99.90																				
144.15	Cu = Ag+Al+Al	>99.90																				
144.2	Cu=Ag+Al+Al+Te Te=Se 0.02-0.05	>99.96																				
144.3	Cu = Ag+Al	>99.90																				
144.4	Cu = Ag+Al+Al	>99.96																				
145	Cu = Ag+Al+Te, Te 0.40-0.70	>99.90						0.004-0.012														
145.1	Cu = Ag+Al+Te, Te 0.30-0.70	>99.85						0.010-0.030	<0.05													
145.2	Cu = Ag+Al+Te, Te 0.40-0.70	>99.40						0.004-0.020														
145.3	Cu = Ag+Al, Te 0.003-0.022	>99.95						0.001-0.005														
147	Cu = Ag+Al+P+S	>99.90						0.002-0.005		0.20-0.50												
147.1	Cu = Ag+Al+P+S	>99.90						0.010-0.030	<0.05	0.05-0.15												
147.2	Cu = Ag+Al+P+S	>99.50						0.10-0.03	<0.10	0.20-0.50												
147.3	Cu = Ag+Al+P+S	>99.80																				
150	Cu = Ag+Al	>99.80																				
151.5	Cu = Ag+Al	>99.80																				
151.5	Cu = Ag+Al+Zn	>99.96																				
155	Cu = Ag+Al	>99.75	0.027-0.10					0.040-0.080														
156	Cu = Ag+Al	>99.60						0.06-0.09														
157.1	Cu = Ag+Al, O 0.07-0.15	>99.71		0.08-0.12	<0.01				<0.01													
157.15	Cu = Ag+Al, O 0.12-0.19	>99.62		0.13-0.17	<0.01																	
157.2	Cu=Ag+Al, B 1.2-1.8, O <0.19	>97.82		0.13-0.17	<0.01																	
157.2	Cu = Ag+Al, O 0.16-0.24	>99.52		0.18-0.22	<0.01																	
157.25	Cu = Ag+Al, O 0.20-0.28	>99.43		0.23-0.27	<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

0.10-0.20
0.05-0.15
0.015-0.03
0.08-0.13
<0.02
0.20-0.30

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr		
157.35	Cu = Ag+Cu, 0.0.25-0.37	>99.24		0.33-0.37	<0.01				<0.01															
157.6	Cu = Ag+Cu, 0.0.52-0.59	>98.77		0.58-0.62	<0.02				<0.01															
162	Cu = Ag+Cu, CH 0.70-1.20	rem			<0.02																			
162.1	Cu = Ag+Cu, CH 0.50-1.20	rem											0.20-0.40											
164	Cu = 100% ALL, CH 0.60-0.90	>99.80																						
165	Cu = Ag+Cu, CH 0.60-1.00	rem		<0.20	<0.02						<0.20	<0.20	0.50-0.70			1.60-1.79								
170	Cu = Ag+Cu, Ni+CO >0.20	rem		<0.20								<0.20				1.90-2.00								
172	Cu = Ag+Cu, Ni+CO >0.20	rem		<0.20					0.20-0.60		<0.20	<0.20				1.90-2.00								
173	Cu = Ag+Cu, Ni+CO >0.20	rem		<0.20							<0.20	<0.20				1.90-2.00								
174	Cu = Ag+Cu	rem		<0.20	<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	<0.20				0.05-0.50		0.35-0.60						
174.2	Cu = Ag+Cu	rem		<0.20	<0.20						<0.20	<0.20				0.05-0.50		0.05-0.60					<0.50	
174.5	Cu = Ag+Cu	rem		<0.20	<0.20				0.20-0.60		<0.20	<0.20				0.15-0.50		0.15-0.60					<0.50	
174.55	Cu = Ag+Cu	rem		<0.20	<0.20						<0.20	<0.20				0.15-0.50							<0.50	
174.6	Cu = Ag+Cu	rem		<0.20	<0.20						<0.20	<0.20				0.15-0.50							<0.50	
174.65	Cu = Ag+Cu	rem		<0.20	<0.20						<0.20	<0.20				0.15-0.50							<0.50	
175	Cu = Ag+Cu	rem		<0.20	<0.10						<0.20	<0.20				0.40-0.70		2.4-2.7					0.10-0.30	
175.1	Cu = Ag+Cu	rem		<0.20	<0.10						<0.20	<0.20				0.40-0.70							0.10-0.30	
175.2	Cu = Ag+Cu, Ni = Ni+CO	rem		<0.20	<0.15						<0.20	<0.20				0.20-0.40		0.03-0.06					0.10-0.30	
175.3	Cu = Ag+Cu, Ni = Ni+CO	rem		<0.6	<0.20						<0.20	<0.20				0.20-0.40							0.10-0.30	
176	Cu = Ag+Cu	rem	0.90-1.10	<0.20	<0.20						<0.20	<0.20				0.25-0.50		1.4-1.7					0.08-0.20	
177	Cu = Ag+Cu, TS 0.40-0.60	rem		<0.20	<0.10						<0.20	<0.20				0.40-0.70		2.4-2.7					0.08-0.20	
180	Cu = Ag+Cu, Ni = Ni+CO	rem			<0.15						0.40-0.80	<0.20				0.25-0.50		0.10-0.60					0.08-0.20	
180.3	Cu = Ag+Cu	>99.90					2.0-3.0				0.08-0.12	<0.20				0.40-0.70		0.10-0.20					0.08-0.20	
180.4	Cu = Ag+Cu	>99.90						0.005-0.150			0.20-0.30	0.05-0.15				0.40-0.70		0.25-0.35					0.08-0.20	
180.45	Cu = Ag+Cu	>99.10									<0.05	<0.05				0.05-0.50		0.20-0.35					0.08-0.20	
180.5	Cu = Ag+Cu, TS 0.005-0.015	>99.80									0.02-0.07	<0.05				0.05-0.15		0.05-0.15					0.01-0.40	
180.7	Cu = Ag+Cu	>99.00									0.01-0.10	<0.05-0.10				0.20-0.40		0.15-0.40					0.01-0.15	
180.8	Cu = Ag+Cu	>98.00		0.01-0.30	0.02-0.20		0.30-1.20				0.01-0.10	<0.05-0.10				0.20-0.70		0.20-0.70					0.01-0.15	
180.9	Cu = Ag+Cu	>96.00									0.50-1.20	<0.20				0.30-1.00		0.30-1.00					0.15-0.80	
181	Cu = Ag+Cu	>98.70														0.4-1.0		0.4-1.0					0.08-0.20	
181.35	Cu = Ag+Cu, CH 0.20-0.60	rem														0.20-0.60		0.20-0.60					0.08-0.20	
181.4	Cu = Ag+Cu	rem														0.15-0.45		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														0.10-0.30		0.10-0.30					0.05-0.15	
181.5	Cu = Ag+Cu	rem														0.50-1.50		0.50-1.50					0.02-0.20	
181.5	Cu = Ag+Cu	rem														0.50-1.50		0.50-1.50					0.02-0.20	
181.5	Cu = Ag+Cu	rem														0.50-1.50		0.50-1.50					0.02-0.20	
185.5	Cu = Ag+Cu	rem	0.08-0.12					<0.04	<0.015				0.10-0.14											
186	Cu = Ag+Cu	rem			0.25-0.80																			
186.1	Cu = Ag+Cu	rem			<0.10			0.02-0.04	0.8-1.5															
186.65	Cu = Ag+Cu	>99.00																						
187	Cu = Ag+Cu	>99.00																						
188.35	Cu = Ag+Cu	>99.00			<0.10			<0.01																
189	Cu = Ag+Cu	rem		<0.01		0.10-0.30																		
189.8	Cu = Ag+Cu	rem			<0.10			<0.05	<0.02															
189.9	Cu = Ag+Cu	rem				<0.50																		
190	Cu = Ag+Cu	rem						0.005-0.015	<0.02															
190.1	Cu = Ag+Cu	rem						0.15-0.35	<0.05															
190.1	Cu = Ag+Cu	rem						0.01-0.05																
190.15	Cu = Ag+Cu	rem																						
190.2	Cu = Ag+Cu	rem						0.02-0.20																
190.25	Cu = Ag+Cu, Mn+Si <0.35	rem						0.02-0.20																
190.3	Cu = Ag+Cu	rem						0.01-0.20																
191	Cu = Ag+Cu, TS 0.35-0.60	rem																						
191.4	Cu = Ag+Cu	rem																						
191.6	Cu = Ag+Cu	rem																						
192	Cu = Ag+Cu	>98.70						0.15-0.35	0.8-1.2															
192.1	Cu = Ag+Cu	rem						0.01-0.04																
192.15	Cu = Ag+Cu	rem						0.025-0.040																
192.15	Cu = Ag+Cu	rem						0.025-0.500	<0.20															
192.2	B 0.005-0.015	rem						0.03-0.07																
192.5	B 0.005-0.025	rem						0.03-0.10																
192.6		rem						0.05-0.40																
192.8		>98.50						0.40-0.80																
194		>97.00						0.50-1.50																
194								2.1-2.6	<0.03															
194.1		rem						1.8-2.3																
194.5		rem						1.5-3.0																
195		>96.00				</																		

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
197.1	Ni<0.10	xem			0.30-1.20	<0.05	<0.05	0.10-0.40	<0.05				<0.02	<0.20				<0.05		0.01-0.20		
197.2	Ni<0.10	xem			0.05-0.40	<0.05	<0.10	0.07-0.15	<0.05				<0.20	<0.20						0.02-0.06		
197.5		xem			0.05-0.50	<0.05	<0.05	0.05-0.40	<0.05				0.05-0.40	<0.20						0.05-0.20		
198		xem			0.35-1.20	<0.05	<0.05	0.10-0.40	<0.05				0.10-1.00	0.30-1.50						0.01-0.20		
198.1		xem			0.02-0.50			0.01-0.10	<0.05				0.10-1.00	0.30-1.50						0.10-1.00		
199		>99.50			1.5-3.0			<0.10						1.0-5.0					<0.10	<0.10	2.9-3.4	<0.10
205		97.0-98.0			<0.05				<0.02					xem								
210		94.0-96.0			<0.05				<0.03					xem								
220		89.0-91.0			<0.05				<0.05					xem								
226		86.0-89.0			<0.05				<0.05					xem								
230		84.0-86.0			<0.05				<0.05					xem								
230.3		81.5-85.5			<0.05				<0.05			0.20-0.40		xem								
234		81.0-84.0			<0.05				<0.05					xem								
240		78.5-81.5			<0.05				<0.05					xem								
240.8		78.0-82.0		<0.10	<0.05				<0.20					xem								
250		74.0-76.0			<0.05				<0.05					xem								
256		71.0-73.0			<0.05				<0.05					xem								
260		68.5-71.5			<0.05				<0.07					xem								
261		68.5-71.5			<0.05			0.02-0.05	<0.05					xem								
261.3		68.5-71.5			<0.05				<0.05					xem	0.02-0.08							
262		67.0-70.0			<0.05				<0.07					xem								
263.8		68.0-72.0		<0.10	<0.05				<0.30					xem								
268		64.0-68.5			<0.05				<0.15					xem								
270		63.0-68.5			<0.07				<0.10					xem								
272		62.0-65.0			<0.07				<0.10					xem								
274		61.0-64.0			<0.05				<0.10					xem								
280		59.0-63.0			<0.07				<0.30					xem								
282		58.0-61.0		<0.005	<0.05			0.12-0.22	<0.03				<0.05	xem								
285.8		49.0-52.0		<0.10	<0.10				<0.50					xem								
298		49.0-52.0		<0.10	<0.10				<0.50					xem								
310		89.0-91.0			<0.10				0.30-0.70					xem								
312		87.5-90.5			<0.10		<0.25		0.7-1.2					xem								
314		87.5-90.5			<0.10		<0.7		1.3-2.5					xem								
316		87.5-90.5			<0.10		0.7-1.2	0.04-0.10	1.3-2.5					xem								

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					xem								
325		72.0-74.5			<0.10				2.5-3.0					xem								
325.1		69.0-72.0			<0.07				0.30-0.70					xem	0.02-0.06							
330		65.0-68.0			<0.06				0.25-0.70					xem								
331		65.0-68.0			<0.06				0.8-1.5					xem								
332		65.0-68.0			<0.07				1.5-2.5					xem								
335		62.0-65.0			<0.15				0.25-0.70					xem								
335.3		62.5-66.5			<0.10				0.30-0.80					xem	0.02-0.06							
340		62.0-65.0			<0.15				0.8-1.5					xem								
342		62.0-65.0			<0.15				1.5-2.5					xem								
344		62.0-66.0			<0.10				0.50-1.00					xem								
345		62.0-65.0			<0.15				1.5-2.5					xem								
347		62.5-64.5			<0.10				1.0-1.8					xem								
348		61.5-63.5			<0.10				0.40-0.80					xem								
349		61.0-64.0			<0.10				0.10-0.50					xem								
350		60.0-63.0			<0.15				0.8-2.0					xem								
353		60.0-63.0			<0.15				1.5-2.5					xem								
353.3		60.5-64.0			<0.10				1.5-3.5					xem	0.02-0.25							
353.4		60.0-63.0			0.10-0.30				1.5-2.5					xem								
356		60.0-63.0			<0.15				2.0-3.0					xem								
360		60.0-63.0			<0.35				2.5-3.7					xem								
362		60.0-63.0			<0.15				3.5-4.5					xem								
365		58.0-61.0			<0.15				0.25-0.70				<0.25	xem								
366		58.0-61.0			<0.15				0.25-0.70				<0.25	xem	0.02-0.06							
367		58.0-61.0			<0.15				0.24-0.70		0.02-0.10		<0.25	xem								
368		58.0-61.0			<0.15			0.02-0.10	0.25-0.70			<0.25	xem									
370		59.0-62.0			<0.15				0.8-1.5				<0.25	xem								
371		58.0-62.0			<0.15				0.6-1.2					xem								
377		58.0-61.0			<0.30				1.5-2.5					xem								
377.1		56.5-60.0			<0.30				1.0-2.5					xem								
378		56.0-59.0			<0.30				1.5-2.5					xem								
380		55.0-60.0		<0.50	<0.35				1.5-2.5				<0.30	xem								
380.1		0.10-0.60			<0.30				1.5-3.0					xem								
385		55.0-59.0			<0.35				2.5-3.5					xem								

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr	
518		rem		<0.01	<0.10			0.10-0.35	<0.02				4.0-6.0	<0.30									
519		rem			0.05-0.20			0.03-0.35	<0.05				5.0-7.0	<0.30									
521		rem			<0.10		0.05-0.20	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				2.3-3.3	<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				1.5-4.5	<0.30									
546	Cu+P+Fe+Sn+Zn >99.5	rem			<0.10			0.01-0.50	3.5-4.5				3.5-4.5	1.5-4.5									
548	Cu+P+Fe+Sn+Zn >99.5	rem			<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					1.7-2.0										
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															
566		rem	29-31											30-34									
606		rem		4.0-7.0	<0.50																		
607		rem		2.3-2.9					<0.01														
608		rem		5.0-6.5	<0.10				<0.10			<0.10		<0.20-0.35									
610		rem		6.0-8.5	<0.50				<0.02			<0.10		<0.10									
613		rem		6.0-7.5	2.0-3.0	<0.20	<0.15	<0.015	<0.01			<0.10	0.20-0.50	<0.20									
614		rem		6.0-8.0	1.5-3.5	<1.00	1.8-2.2	<0.015	<0.01					<0.20									
615	Cu = Ag+Cu	rem		7.7-8.3					<0.015														
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	<0.80									
619	Cu = Ag+Cu	rem		8.5-11.0	3.0-4.5				<0.02			<0.10	<0.60	<0.80									
622	Cu = Ag+Cu	rem		11.0-32.0	2.0-4.2				<0.02			<0.10	<0.60	<0.80									
623	Cu = Ag+Cu	rem		8.5-10.0	2.0-4.0	<0.50	<1.0		<0.02			<0.25	<0.60	<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	
624	Cu = Ag+Cu	rem		10.0-11.5	2.0-4.5	<0.30						<0.25	<0.20										
625	Cu = Ag+Cu	rem		12.5-13.5	3.5-5.0	<2.00			<0.02			<0.04		<0.02									
625.8	Cu = Ag+Cu	rem		12.0-13.0	3.0-5.0				<0.02			<0.04		<0.02									
625.81	Cu = Ag+Cu	rem		13.0-14.0	3.0-5.0				<0.02			<0.04		<0.02									
625.82	Cu = Ag+Cu	rem		14.0-15.0	3.0-5.0				<0.02			<0.04		<0.02									
627.3	Cu = Ag+Cu	rem		8.5-11.0	4.0-6.0	<0.50	4.0-6.0		<0.05			<0.10	<0.10	<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	rem		9.7-10.9	2.0-3.5	<1.50	4.5-5.5					<0.15	<0.20	<0.30									
630.2	Cu = Ag+Cu	rem		10.5-11.5	4.0-5.5	<1.50	4.2-6.0		<0.02			<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	rem	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											
634	Cu = Ag+Cu	rem		2.6-3.2	<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		<0.20		<0.05			1.5-2.1		<0.80									
641.1	Cu = Ag+Cu	rem		8.0-11.0		<0.50			1.0-2.0			1.5-2.2	<0.20	<0.50	<0.15			0.25-0.55					
642	Cu = Ag+Cu	rem		6.3-7.6	<0.30		<0.25		<0.05			1.5-2.0	<0.20	<0.50	<0.15								
642.1	Cu = Ag+Cu	rem		6.3-7.0	<0.30		<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			<0.03			1.5-3.0		<0.20									
644	Cu = Ag+Cu	rem		3.5-4.5	<0.05		4.2-5.0		<0.03			0.40-0.80	<0.10	<0.20									
647	Cu = Ag+Cu	rem		<0.10	<0.10		1.6-2.2		<0.10			0.40-0.80		<0.50									
647.1	Cu = Ag+Cu	rem			<0.10	<0.10	2.9-3.5					0.35-0.60		0.10-0.40									
647.2	Cu = Ag+Cu	rem					1.6-2.2					0.35-0.60		0.10-0.40									
647.5	Cu = Ag+Cu	rem			<0.25				<0.01			0.20-0.80	0.20-0.80	0.50-1.50									
647.25	Cu = Ag+Cu Ck <0.01	rem					1.3-2.7		<0.02			0.20-0.80	0.20-2.00	0.20-2.50									
647.3	Cu = Ag+Cu	rem					2.9-3.5		<0.05			0.50-0.90	1.0-1.5	0.20-0.50									
647.4	Cu = Ag+Cu Ck <0.01	rem					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			
647.6	Cu = Ag+Cu	rem			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	rem				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		
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	<1.50									
653	Cu = Ag+Cu	rem			<0.80				<0.05			2.0-2.6		<1.50									
654	Cu = Ag+Cu	rem							<0.05			2.7-3.4	1.2-1.9	<0.50									
Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr	
647.8	Cu = Ag+Cu	rem					1.0-3.5		<0.02			0.20-0.90	0.10-2.00	0.20-2.50						<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	<1.50									
653	Cu = Ag+Cu	rem			<0.80				<0.05			2.0-2.6		<1.50									
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
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	.	.	.	0.25-1.50	0.40-0.60	.	.	.
817		>94.20	0.80-1.20	.	.	.	0.25-1.50	.	<0.02	.	.	.	.	.	0.30-0.55	.	.	.	1.4-1.7	.	.	.
818		>95.60	0.80-1.20	.	.	.	<0.20	.	.	.	.	<0.15	<0.10	<0.10	0.45-0.80	.	.	2.4-2.7	<0.10	.	.	.
820		>95.00	.	<0.10	<0.10	.	<0.20	.	<0.02	.	.	.	.	.	.	.	.	.	.	.	.	.
821		>95.50	.	.	.	.	0.25-1.50	.	.	.	.	.	.	.	.	.	.	0.25-1.50	.	.	.	.
822		>96.50	.	.	.	.	1.0-2.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
824		>96.40	.	<0.15	<0.20	.	<0.10	.	<0.02	.	.	0.20-0.35	<0.10	<0.10	0.35-0.80	.	.	0.20-0.40	<0.10	.	.	.
825		>95.50	.	<0.15	<0.25	.	<0.20	.	<0.02	.	.	0.20-0.35	<0.10	<0.10	1.65-1.75	.	.	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	.	.	0.20-0.35	<0.10	<0.10	2.35-2.55	.	.	0.35-0.70	<0.10	.	.	.
828		>94.80	.	<0.15	<0.25	.	<0.20	.	1.0-2.0	.	.	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		86.0-92.0	.	.	.	.	.	.	<0.50	.	.	.	<0.20	8.0-12.0	.	.	.	.	.	.	.	.
834.1		88.0-91.0	.	<0.05	<0.05	.	<0.05	.	<0.50	.	.	<0.005	0.25-0.70	rem	.	.	.	.	.	.	.	.
834.2		88.0-92.0	.	<0.10	<0.10	.	0.25-0.70	.	<0.50	.	.	<0.005	1.0-3.5	rem	.	.	.	.	.	.	.	.
834.5		87.0-89.0	.	<0.05	<0.30	.	0.8-2.0	<0.03	1.5-3.0	<0.08	<0.25	<0.005	0.2-3.5	5.5-7.5	.	.	.	.	.	.	.	.
834.5		87.0-89.0	.	<0.05	<0.30	.	0.50-1.00	<0.03	3.5-4.5	<0.08	<0.25	<0.005	5.5-6.5	1.0-2.5	.	.	.	.	.	.	.	.
835.2		86.0-88.0	.	<0.08	<0.35	.	<1.0	<0.03	3.5-4.5	<0.08	<0.25	<0.005	3.5-4.5	1.5-4.0	.	.	.	.	.	.	.	.
835.2		rem	.	<0.30	<0.50	.	<1.0	<0.05	2.0-3.0	<0.08	<0.25	<0.005	4.0-6.0	10.0-16.0	.	.	.	.	.	.	.	.
836		84.0-86.0	.	<0.05	<0.40	.	<1.0	<0.05	6.0-8.0	<0.08	<0.25	<0.005	4.0-6.0	4.0-6.0	0.05-0.20	.	.	.	.	.	.	.
837		83.0-88.0	.	<0.05	<0.30	.	<0.30	<0.05	4.0-6.0	<0.08	<0.25	<0.005	4.0-6.0	4.0-6.0	0.05-0.20	.	.	.	.	.	.	.
838		82.0-83.8	.	<0.05	<0.30	.	<1.0	<0.03	5.0-7.0	<0.08	<0.25	<0.005	3.0-4.2	5.0-8.0	.	.	.	.	.	.	.	.
838.1		83.8	.	<0.01	<0.50	.	<2.0	<0.03	4.0-6.0	<0.08	<0.50	<0.005	2.0-3.0	7.5-9.5	<0.50	.	.	<0.10	.	.	.	.
842		78.0-82.0	.	<0.05	<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	.	<0.05	<0.40	.	<1.0	<0.20	6.0-8.0	<0.08	<0.25	<0.005	2.0-3.5	7.0-10.0	.	.	.	.	.	.	.	.
844.1		77.0-79.0	.	<0.01	<0.40	.	<1.0	<0.02	7.0-9.0	<0.08	<0.25	<0.005	3.0-4.5	7.0-11.0	.	.	.	.	.	.	.	.
845		75.0-77.0	.	<0.05	<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	.	<0.05	<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	.	<0.05	<0.60	.	<1.0	<0.02	1.5-3.8	<0.05	<0.20	<0.005	0.7-2.0	20.0-27.0	.	.	.	.	.	.	.	.
852.1		70.0-75.0	.	<0.05	<0.80	.	<1.0	.	2.0-5.0	.	.	<0.005	1.0-3.0	rem	0.02-0.06	.	.	.	.	.	.	.
853		68.0-72.0	.	<0.01	<0.80	.	<1.0	.	<0.50	.	.	<0.005	<0.50	rem	0.02-0.06	.	.	.	.	.	.	.
853.1		65.0-70.0	.	<0.35	<0.70	.	<1.0	.	1.5-3.8	.	.	<0.05	0.50-1.50	24.0-32.0	.	.	.	.	.	.	.	.
854		59.0-63.0	.	<0.20	<0.20	.	<0.20	.	<0.20	.	.	.	<0.20	rem	.	.	.	.	.	.	.	.
855																						
Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
856		59.0-63.0	.	<0.8	<0.20	<0.20	<0.20	.	<0.20	.	.	<0.05	<0.20	rem	.	.	.	.	.	.	.	.
857		58.0-64.0	.	0.20-0.80	<0.80	<0.50	<1.0	.	1.0-2.5	.	.	<0.05	0.50-1.50	32.0-40.0	.	.	.	.	.	.	.	.
857.1		58.0-63.0	.	<0.50	<0.50	<0.25	<0.50	<0.01	1.0-2.5	<0.05	<0.05	<0.05	<1.0	rem	.	.	.	.	.	.	.	.
858		>57.00	.	4.5-5.5	2.0-4.0	2.5-5.0	.		<1.5		<0.05	<1.50	<0.20	31.0-41.0	<0.05	.	.	.	.	.	.	.
861		66.0-68.0	.	4.5-5.5	2.0-4.0	2.5-5.0	.		<1.5		<0.05	<1.50	<0.20	31.0-41.0	<0.05	.	.	.	.	.	.	.
862		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		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	.	.	.	.	.	.	.	.
864		56.0-62.0	.	0.50-1.50	0.40-2.00	0.10-1.00	<1.0	0.03-0.06	0.50-1.50	.	0.03-0.06	2.5-4.0	0.50-1.50	34.0-42.0	0.03-0.06	.	.	.	.	.	.	.
865		55.0-60.0	.	0.50-2.50	0.40-2.00	0.10-1.5	<1.0	.	<0.40	.	.	.	<1.0	36.0-42.0	.	.	.	.	.	.	.	.
865.5		>57.00	.	0.50-2.50	0.7-2.0	0.10-3.00	<1.0	.	<0.50	.	.	<1.00	<1.00	rem	.	.	.	.	.	.	.	.
867		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		53.5-57.0	.	<2.0	1.0-2.5	2.5-4.0	2.5-4.0	.	<0.20	.	.	1.0-5.0	<1.00	rem	.	.	.	.	.	.	.	.
872		>89.00	.	<1.5	<2.50	<1.50	.	.	<0.50	.	.	3.5-4.5	<1.00	<5.00	.	.	.	.	.	.	.	.
873		>94.00	.	<0.8	<0.20	0.8-1.5	.	.	<0.20	.	.	2.5-4.0	<1.00	12.0-16.0	.	.	.	.	.	.	.	.
874		>79.00	.	<0.8	<0.20	0.8-1.5	.	.	<1.0	.	.	2.5-4.0	<1.00	12.0-16.0	.	.	.	.	.	.	.	.
874.1		>79.00	.	<0.8	<0.20	0.8-1.5	.	.	<1.0	.	.	2.5-4.0	<1.00	12.0-16.0	0.03-0.06	.	.	.	.	.	.	.
874.2		>79.00	.	<0.8	<0.20	0.8-1.5	.	.	<1.0	.	.	2.5-4.0	<1.00	12.0-16.0	0.03-0.06	.	.	.	.	.	.	.
874.3		>79.00	.	<0.8	<0.20	0.8-1.5	.	0.03-0.06	<1.0	.	0.03-0.06	2.5-4.0	<1.00	12.0-16.0	.	.	.	.	.	.	.	.
875		>79.00	.	<0.5	<0.20	0.8-1.5	.	.	<0.50	.	.	3.0-5.0	<1.00	12.0-16.0	.	.	.	.	.	.	.	.
875.1		>79.00	.	<0.50	<0.20	0.8-1.5	.	.	<0.50	.	.	3.0-5.0	<1.00	12.0-16.0	.	.	.	.	.	.	.	.
875.2		>79.00	.	<0.50	<0.20	0.8-1.5	.	.	<0.50	.	.	3.0-5.0	<1.00	12.0-16.0	.	.	.	.	.	.	.	.
875.3		>79.00	.	<0.50	<0.20	0.8-1.5	.	.	<0.50	.	.	3.0-5.0	<1.00	12.0-16.0	.	.	.	.	.	.	.	.
876		>88.00	.	<0.20	<0.20	<0.25	.	.	<0.20	.	.	3.5-4.5	<1.00	4.0-7.0	.	.	.	.	.	.	.	.
876.1		>90.00	.	<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	.	.	.	.	.	.	.
878		>80.00	.	<0.15	<0.15	<0.15	<0.20	<0.01	<0.15	<0.05	<0.05	3.8-4.2	&									

Alloy	Notes	Cu	Ag	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	As	Be	Bi	Co	Cr	Mg	Ti	Zr
958.2		>77.50		9.0-10.0	4.0-5.0	<1.50	4.5-5.8		<0.02			<0.10	<0.20	<0.20								
959		rem		12.0-13.5	3.0-5.0	<1.50	<0.50		<0.01	<0.02		<0.50										
962	C <0.10, No <1.00	rem		1.0-1.8	1.0-1.8	1.50	9.0-11.0	<0.02	<0.01	<0.02		<0.50										
963	C <0.15, No 0.50-1.50	rem		0.50-1.50	0.25-1.50	18.0-22.0	18.0-22.0	<0.02	<0.01	<0.02		<0.50										
964	C <0.15, No 0.50-1.50	rem		0.25-1.50	<1.50	28.0-32.0	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	29.0-33.0		<0.01			<0.15				1.10-1.20					0.01-0.20	0.1-0.2
969	No 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	
969.5	No <0.10	rem			<0.50	0.50-0.30	14.5-15.5		<0.02			<0.30	5.8-8.5	<0.50						<0.15		
969.5	No <0.10	rem			<0.50	0.05-0.40	11.0-15.5		<0.02			<0.30	5.8-8.5	<0.50						<0.15		
973		53.0-58.0		<0.005	<1.50	<0.50	11.0-14.0	<0.05	8.0-11.0	<0.08	<0.35	<0.15	1.5-3.0	17.0-25.0								
974		58.0-61.0			<1.50	<0.50	15.5-17.0		4.5-5.5			<0.15	2.5-3.5	rem								
976		63.0-67.0		<0.005	<1.50	<1.00	19.0-21.5	<0.05	3.0-5.0	<0.08	<0.25	<0.15	3.5-4.5	3.0-9.0								
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			<0.50								
984		rem	<1.50		<0.70		<0.50	<0.10	26.0-33.0		<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								
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		>54.00		0.50-3.00	<1.00	11.0-15.0	4.0-6.0		<2.0					19.0-25.0								
997.5	No 4.0-6.0	55.0-61.0		0.25-3.00	<1.00	17.0-23.0	<5.0		0.50-2.50					17.0-23.0								

These are specifications for reference purposes only, not samples for sale.

