AMPCO METAL is an integrated metal producer, offering under the AMPCO® and AMPCOLOY® brands, the widest range of premium specialty bronzes and copper alloys, providing exceptional physical and mechanical properties.

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UKAS MANAGEMENT SYSTEMS

ADS aerospace sector certification scheme

ISO 9001
AS 9120
BUREAU VERITAS Certification

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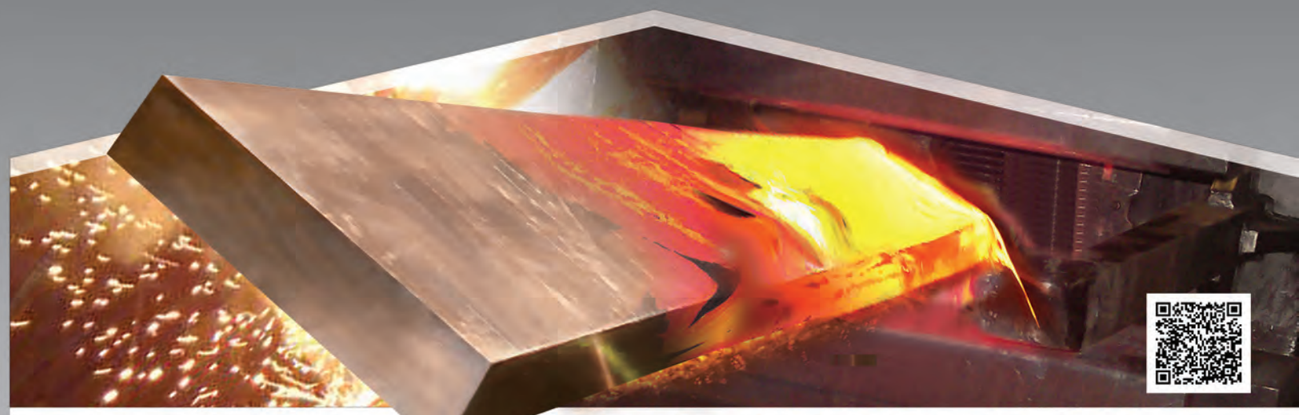

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	AMPCO Reference	Nearest International Standards: ISO	AFNOR	AFNOR Alloy	DIN	ASTM	Nominal Chemical Composition (Remainder Cu): Sn	Zn	Pb	Al	Fe	Ni	Mn	Mechanical & Physical Properties: D Lbs/in³	Rm KSI	$R_{p\,0,2}$ KSI	A_5 %	HBW 10/3000 (ROCKWELL)	Thermal Conductivity BTU/ft.hr.°F	Linear Expansion Coefficient 10^{-6} 1/°F	Coefficient of Friction Unlubricated	Usage Guideline: Need for Lubrication	V Average Speed Ft/s	B Average Load KSI
AMPCO® BRONZE	AMPCO® 8	AMPCO METAL Specification					0,25			6,5	2,5			0.287	80	41	40	153 (82B)	31	8.9	0.17	Moderate	4.9	12.3
	AMPCO® 18									10,5	3.5			0.269	105	53	14	192 (92B)	36	8.9	0.18	Moderate	4.9	14.5
	AMPCO® 18.23									10,5	3.5			0.269	110	56	16	207 (95B)	34	8.9	0.18		4.9	14.5
	AMPCO® 21									13,1	4,4		2	0.260	110	61	1	286 (30C)	26	8.9	0.21		2.3	16.7
	AMPCO® 22									14,1	4,7		2	0.255	105	62	0.5	332 (35C)	24	8.9	0.25	Moderate	2	17.4
	AMPCO® 25						Proprietary							0.250	R_{mc} 229	$R_{rc\,0,1}$ 103	0.2	364 (39C)	19	8.9	0.30	Moderate	1.6	18.1
	AMPCO® 26													0.250	R_{mc} 232	$R_{rc\,0,1}$ 104	0	420 (45C)	19	8.9	0.32	Moderate	1.3	18.9
	AMPCO® 45					AMS 4640 AMS 4880				10	2.5	5	1.5	0.272	118	75	15	228 (98B)	26	9.0	0.23	High	4.9	13.1
	AMPCO® M4					AMS 4590 AMS 4881				10.5	4.8	5	1.5	0.269	145	115	8	260/300 (26C/32C)	24	8.9	0.23		3.3	47.9

	AMPCO Reference	Nearest International Standards: ISO	AFNOR	AFNOR Alloy	DIN	ASTM	Nominal Chemical Composition (Remainder Cu): Cr	Co	Be	Zr	Ni	Si	Mn	Mechanical & Physical Properties: D Lbs/in³	Rm KSI	$R_{p\,0,2}$ KSI	A_5 %	HBW 10/3000 (ROCKWELL)	Thermal Conductivity BTU/ft.hr.°F: 68°F	212°F	392°F	Elec.C %IACS	RWMA Class
AMPCOLOY® ALLOYS	AMPCOLOY® 83	CuBe2			2.1247	C17200		0.5	2					0.298	190	120	5	360 (39C)	62	69	78	20%	4
	AMPCOLOY® 944	AMPCO METAL Specification			Alloys without Beryllium		1				7	2		0.314	136	106	5	294 (31C)	90	98	110	30%	4
	AMPCOLOY® 940						0,4				2.5	0.7		0.315	100	75	13	210 (95B)	120	131	140	48%	3
	AMPCOLOY® 89	CuNiBe					Co + Ni 2		0.5					0.316	107	99	12	230 (98B)	173	185	196	69%	3
	AMPCOLOY® 95	CuCoNiBe			~2.1285	~C17510	Co+Ni 2		0.5					0.316	120	80	10	240 (23C)	125	136	147	52%	3
	AMPCOLOY® 972	CuCrZr			2.1293	C18150	>1			>0,10				0.320	75	68	18	151 (82B)	192	202	212	82%	2

The alloys below are for comparison purpose only

		Nearest International Standards: ISO	AFNOR	AFNOR Alloy	DIN	ASTM	Nominal Chemical Composition (Remainder Cu): Sn	Zn	Pb	Al	Fe	Ni	Mn	Mechanical & Physical Properties: D Lbs/in³	Rm KSI	$R_{p\,0,2}$ KSI	A_5 %	HBW 10/3000 (ROCKWELL)	Thermal Conductivity BTU/ft.hr.°F	Linear Expansion Coefficient 10^{-6} 1/°F	Coefficient of Friction Unlubricated	Usage Guideline: Need for Lubrication	V Average Speed Ft/s	B Average Load KSI
TIN-LEADED BRONZE	A30	UPb15Sn8	NF EN1982	UPb15	2.1182	C93800	7	<2	15			<2		0.334	29	13	8	65 (40B)	36	10.4	0.04	Small	39.4	2.9
	A32	UPb10Sn10	NF EN1982	UPb10	2.1176	C93700	10	<2	10			<2		0.325	32	16	8	70 (40B)	31	10.4	0.05		32.8	3.6
TIN BRONZE	A35	CuSn7Pb	NF EN1982	UE7	2.1090	C93200	7	4	6.5			<2		0.318	38	17	12	70 (40B)	36	10.3	0.06	Moderate	23	5.8
	A712	CuSn12P	NF EN1982	UE12P	2.1052	C90800	12	<0,2	<0,7			<2		0.311	44	22	12	90 (52B)	27	10.3	0.07		19.7	8.7
	A708	CuSn8 P		UE9P	2.1030	C52100	8	<0,2			<0,1	P : 0,01-0,24		0.318	51	25	25	80 (41B)	36	9.4	0.07		9.8	7.3
BRASS	A393	CuZn39Pb3	NF EN1982	UZ39	2.0401	C38500		39	<3,5					0.307	62	33	10	120 (69B)	58	10.3		Very High	3.3	8.7
	A402	CuZn40Al2	NF EN1982	UZ40	2.0550	C28000		40		2			2	0.296	78	36	15	150 (82B)	68	11.7			4.9	11.6
HiGH RESISTANCE BRASS	A780	CuZn23Al4	NF EN1982	UZ23		C86200		23,4		4,3	2,5		2,5	0.282	72	36	8	160 (85B)	12	9.4	0.17	Very High	4.9	11.6
	A820	CuZn19Al6	NF EN1982	UZ19				20		6,2	3		3	0.275	109	72	8	220 (97B)	12	9.4	0.17		3.3	13.1
ALUMINIUM BRONZE	A609	CuAl9Ni3Fe2	NF EN1982	UA9			<0,1	<0,3		9	2	3	1,5	0.275	72	26	18	110 (65B)	22	8.9	0.23	High	4.9	10.1
	A608	CuAl10Ni5Fe4	NF L14-705	UA10N	2.0975	C95800	<0,05	<0,5		10	4	5	<1	0.275	85	35	18	160 (85B)	21	8.9	0.23		4.9	13.1
COPPER TUNGSTEN		CuW / W					CW à 66%, 70%, 75%, 80%, 100%																	

Please ask us about your other copper alloy requirements.

The above are nominal values. If specific minimum figures are required, please contact your local AMPCO METAL representative.