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MATERIAL SELECTION GUIDE

AMPCO® ALUMINUM BRONZES • AMPCOLOY® HIGH-CONDUCTIVITY ALLOYS
WEAR RESISTANCE • CORROSION RESISTANCE • THERMAL & ELECTRICAL CONDUCTIVITY



Excellence in Engineered **Alloys**



Nearest International Standards					
AMPCO Reference	ISO	EN	DIN	ASTM	AMS
AMPCO® 8					
AMPCO® 18					
AMPCO® 18.23					
AMPCO® 21					
AMPCO® 22	AMPCO METAL Specification				
AMPCO® 25					
AMPCO® 26					
AMPCO® 45					4640 4880
AMPCO® M4					4590 4881

Nominal Chemical Composition (Remainder Cu)							Mechanical & Physical Properties								Usage Guideline		
Sn	Zn	Pb	Al	Fe	Ni	Mn	D g/cm³	Rm MPa	Rp0.2 MPa	As %	HBW 10/3000	Thermal Conductivity W/m·K	Coefficient of Expansion 10⁻⁶/K	Coefficient of Friction Unlubricated	Need for Lubrication	Average Speed m/s	Average Load MPa
0.25			6.5	2.5			7.95	586	386	35	187	54	16.3	0.17	● Moderate	1.5	85
			10.5	3.5			7.45	708	361	13	194	63	16.2	0.18	● Moderate	1.5	100
			10.5	3.5			7.45	758	386	16	207	59	16.2	0.18	● Moderate	1.5	100
			13.1	4.4		2	7.20	735	407	1	286	42	16.2	0.21	● Moderate	0.7	115
			14.1	4.7		2	7.06	724	427	0.5	332	42	16.2	0.25	● Moderate	0.6	120
Proprietary							6.93	R _{mc} 1579	R _{p0.1} 706	0.2	375	33	16.2	0.30	● Moderate	0.5	125
							6.84	R _{mc} 1608	R _{p0.1} 715	0	420	33	16	0.32	● Moderate	0.4	130
			10	2.5	5	1.5	7.53	814	517	15	228	46	16.2	0.23	● High	1.5	90
			10.5	4.8	5	1.5	7.45	1000	793	8	286	42	16	0.23	●	1	330



Nearest International Standards					
AMPCO Reference	ISO	EN	DIN	ASTM	AMS
AMPCOLOY® 83	CuBe2	CW 101C	2.1247	C17200	
AMPCOLOY® 944 Beryllium free	AMPCO METAL Specification				
AMPCOLOY® 940 Beryllium free					
AMPCOLOY® 88	CuCoNiBe	CW 104C	~ 2.1285	~ C17510	
AMPCOLOY® 95	CuCoNiBe	CW 103C	~ 2.1285	~ C17510	
AMPCOLOY® 972 Beryllium free	CuCrZr	CW 106C	2.1293	C18150	

Cr	Be	Zr	Si	Co	Ni	Mn	D g/cm³	Rm MPa	Rp0.2 MPa	A₅ %	HBW 10/3000	Thermal Conductivity W/m·K			Electrical Conductivity % IACS	RWMA Class
												20°C	100°C	200°C		
	1.9			Co+Ni: 0.5			8.26	1250	1000	4	380	106	130	145	22%	4
1			2		7		8.69	938	730	5	294	156	170	190	30%	4
0.4			0.7		2.5		8.71	689	517	13	210	208	226	243	48%	3
	0.5			Co+Ni: 2.5			8.75	890	680	14	270	230	251	272	48%	3
	0.5			Co+Ni: 2			8.75	850	600	15	240	220	235	254	52%	3
1		0.1					8.90	520	466	20	152	320	350	367	86%	2

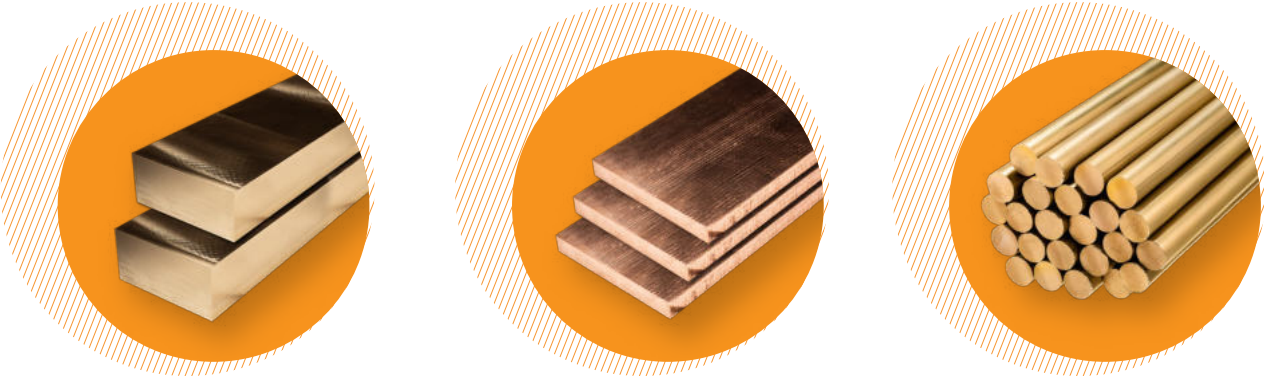
*Please ask us about your other copper alloy requirements.

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



PRODUCT SELECTION TOOL

The product selection tool is an app that allows you to find the best alloy for your application based on key parameters such as mechanical properties, physical properties, industries or end-use applications. You can compare several alloys and request our technical expert's assistance.



Wear & Corrosion Resistant Aluminum Bronzes

High-Conductivity Alloys

Deep Drawing

Rollercoasters

Plastic Processing



AMPCO® 25/26



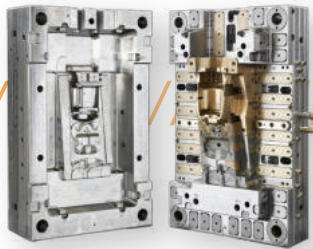
AMPCO® 18



AMPCO® 18/21



AMPCOLOY® 940/95/944/83



Tube Bending

Tube Forming

Marine

Oil, Gas & Chemical



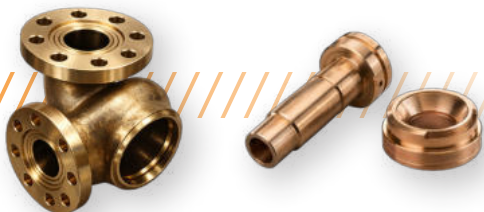
AMPCO® 18.23/M4 AMPCO® 18/21/22/M4



AMPCO® 22/25/26



AMPCO® 8/18/45/M4



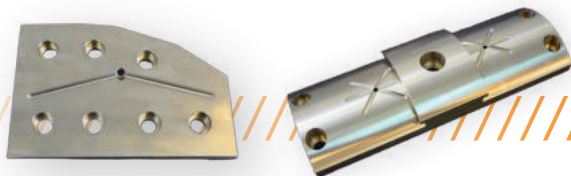
AMPCOLOY® 83 AMPCO® 45

Steel Mill

General Engineering

Resistance Welding

Aerospace



AMPCO® 18/M4



AMPCO® 18/21/M4



AMPCOLOY® 972/940/944/95/83



AMS 4640/4590/4880/4881

Watchmaking

Applications in Hydrogen Atmosphere

Die Casting

Food Industry



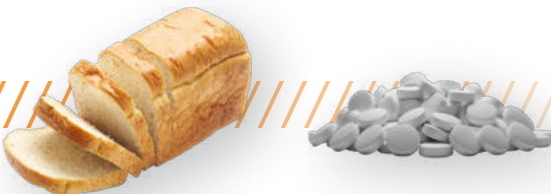
AMPCO® 18



AMPCO® 18 & AMPCOLOY® 83



AMPCOLOY® 940/88/95

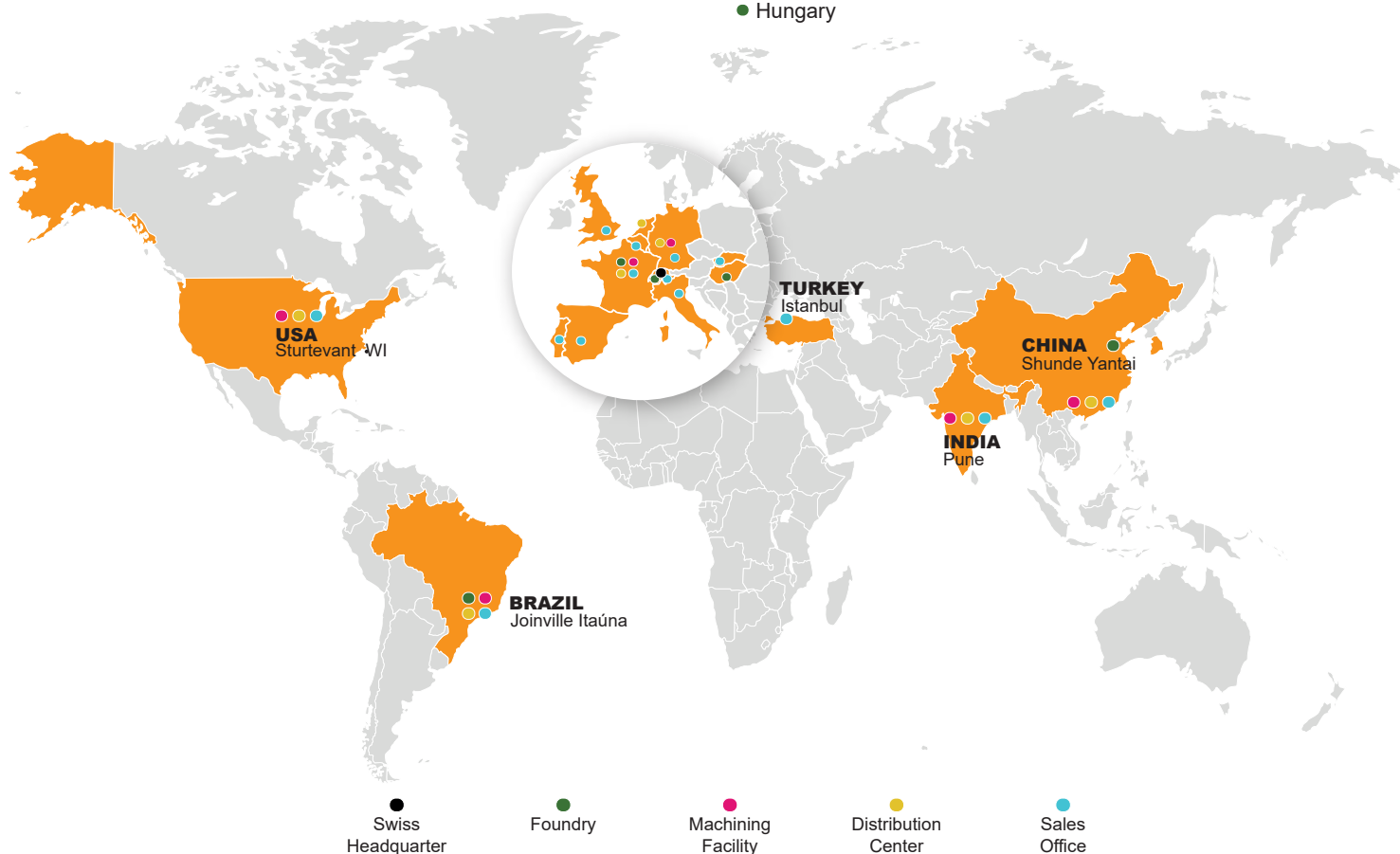


AMPCO® 8/18/22/M4 AMPCOLOY® 940/944



Excellence in Engineered **Alloys**

- UK
- Benelux
- Portugal
- Netherlands
- Austria
- Switzerland HQ
- France
- Germany
- Italy
- Spain
- Slovakia
- Hungary



HEADQUARTERS

AMPCO METAL S.A.

SWITZERLAND

Route de Chésalles 48

P.O. Box 45

1723 Marly

T/+41 26 439 9300

E/info@ampcometal.com

FIND YOUR LOCATION

