MARMETAL

C71500 / C71520 70-30 COPPER-NICKEL

ASTM B171/ASME SB-171 ASTM B111/ASME SB-111
MIL-C15726F MIL-T-16420K MIL-T-15005

UNS No.	Copper & Silver	Nickel + Cobalt	Manganese	Lead	Iron	Zinc	Other Elem.
C71500	remainder	29.0-33.0	1.0 max	0.05[a] max	0.40-1.0	1.0[a]	
C71520	65.0 min	29.0-33.0	1.0 max	0.02	0.40-1.0	0.50	0.05 C .02 S/P

[a]For subsequent welding application max levels are: Zinc 0.50, Lead 0.02, Phosphorus 0.02, Sulfur 0.02, Carbon 0.05

70/30 Cupro-Nickel is a copper-nickel alloy that this almost entirely resistant to stress corrosion and is ideal when used in applications involving high-velocity polluted seawater. Typical CuNi application for use in the chemical and desalination industries include tubes and tubesheets for condensers, evaporators and heat exchangers; tubes for carrying seawater; fittings; valve bodies; pump bodies and impellers.

Density @ *68° F*	0.323 lb/in^3
Melting Range	2140-2265° F
Hot Formability	Good
Cold Formability	Good
Machinability rating (C360 = 100)	20
Brazing	Excellent
Soldering	Excellent
Gas-shielded arc welding	Excellent
Oxy-acetylene welding	Good
Carbon-arc welding	Not recommended
Coated metal-arc welding	Good
Resistant welding: spot and seam	Good
Resistance welding: butt	Good

ASTM B171/ASME SB-171
Properties for M20 & O25 tempers

Thickness, in.	Tensile, min ksi (MPa)	Yield, 0.5% Offset. min (MPa)	Elongation in 2", min, %
2.5 and under	50 (345)	20 (105)	30
over 2.5 to 5	45 (310)	18 (125)	30
Thickness Tolerances*			
	<=36 in.	>36 to 60 in.	>60 to 96 in in.
>.25 to .50	.031	.033	.036
>.50 to .75	.035	.037	.040
>.75 to 1.0	.041	.043	.046
>1.0 to 1.5	.047	.050	.052
>1.5 to 1.75	.053	.056	.058
>1.75 to 2.00	.062	.068	.077
>2.00 to 5.00	.072	.077	.081

MIL-C-15726F

Thickness x Width (W) in.	Temper	Tensile, min ksi	Yield 0.5% min ksi	Elongation in 2", min, %
<=2-1/2, all W	060/M20 Soft	50	20	30
>2-1/2, all W	M20 Soft	45	18	35
<=3/16 x <=24W	H01	60	30	10
<=3/16 x >24 W	H01	55	25	10
<=1/2 x >24 W	M20 Hard	50	22	15
>1/2, all W	M20 Hard	45	18	20
All OD Sizes	060	45	18	30
<=1/2 OD	H01	65	50	10
>1/2 to 1 OD	H01	60	45	15
>1 to 3OD	H01	55	35	20

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*Thickness tolerances for MIL-C-15726F are based on lot weight.
Consult FED-STD-146 3a(7) for min/max weight

2950 TURNPIKE DRIVE | HATBORO, PA 19040 | P: 215.675.4645 | F: 215-675-9947 | sales@marmetal.com | www.marmetal.com