Hamilton Precision Metals
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TECHNICAL DATA SHEET

CU-NI 715

Cu-Ni 715 is a copper-nickel alloy that is resistant to corrosion in sea water. The alloy has good fatigue strength and relatively high thermal conductivity.

NOMINAL COMPOSITION:

Copper	70%	Nickel	Balance

TYPICAL MECHANICAL PROPERTIES:[1]

	ANNEALED	COLD ROLLED
Ultimate Tensile Strength	65,000 PSI	100,000 PSI
Yield Strength (.2% Offset)	35,000 PSI	90,000 PSI
Elongation in 2" *	30%	2%
Modulus of Elasticity (Tension)	22 X 10^6 PSI	

*****The measured elongation will be less as thickness decreases to .002" and less.

[1] These values may be adjusted by control of process variables – consult HPM for desired values.

Cu-Ni 715
PHYSICAL PROPERTIES:[2]

Density	-	0.322 lbs./cu.in.
Melting Point (approx.)		- 1170ºC
Electrical Resistivity @ R.T.	-	41.2 Microhm-cm
Thermal Expansion Coefficient (20º to 95ºC)	-	15.5 x 10^{-6}/ºC
Thermal Conductivity @ R.T.	-	29.4 W/m· K
Magnetic Attraction	-	None
Specific Heat	-	.09 gram·cal./ºC

GENERAL INFORMATION:

The alloy is readily formed in the annealed temper, and can be joined by the standard welding, brazing and soldering processes.

AVAILABILITY:

Cu-Ni 715 is available from Hamilton Precision Metals as strip product in thicknesses from .0005" to .010" in widths up to 12". The material conforms to ASTM B122 and UNS C71500.

[2] Typical values to guide alloy selection but are not a guarantee of minimum or maximum.