CLAL-MSX ARCAP Anticorrosion AP1D H14 4/4 hard, Drawn Copper Alloy, Wire and rod, 2.5< diameter< 5

Category : Metal , Nonferrous Metal , Copper Alloy

Material Notes:

High Corrosion Resistance: ARCAP alloys are very corrosion resistant to the majority of chemical and physical environments. CLAL can provide data for the corrosion resistance of ARCAP alloys. In particular ARCAP alloys have a very high resistance to scaling and clogging of pipes by hard water and the blocking of pipes used for transport powder products such as sodium aluminate, cement, etc. High Mechanical Properties: In annealed temper ARCAP, alloys have an elongation up to 45 %, which allows deep drawing. In spring temper the ultimate tensile strength is above 800 MPa. Non-Magnetic: A detector sensitive to 1/10 of nanotesla, placed at less than 1 mm from ARCAP alloys will not show any magnetic interference. This non magnetism is kept even at very low temperatures (measured at 4.2° k). Stable Resistivity: Temperature variations have almost no effect on the resistivity of ARCAP alloys. The temperature coefficient of the grade AP4 is 4 x 10-5/°C and 25 x 10-5/°C for the other grades. Excellent Behaviour At Low Temperature: At low temperatures the mechanical properties of ARCAP alloys are improved. A cryogenic application shows that the ultimate tensile strength and the yield strength increase without any diminution of the elongation or the impact strength. Very Easy To Process: ARCAP alloys are easily processed whether by forging, stamping, deep drawing, machining, welding or brazing. They are also easily plated.Information provided by CLAL-MSX

Order this product through the following link:
http://www.lookpolymers.com/polymer_CLAL-MSX-ARCAP-Anticorrosion-AP1D-H14-44-hard-Drawn-Copper-Alloy-Wire-and-rod-25-diameter-5.php

Physical Properties	Metric	English	Comments
Density	8.80 g/cc	0.318 lb/in³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	600 - 750 MPa	87000 - 109000 psi	
Elongation at Break	>= 2.0 %	>= 2.0 %	L_O=50 mm
Modulus of Elasticity	163 - 170 GPa	23600 - 24700 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	16.0 µm/m-°C @Temperature 0.000 - 300 °C	8.89 µin/in-°F @Temperature 32.0 - 572 °F	
	17.0 µm/m-°C @Temperature 0.000 - 600 °C	9.44 µin/in-°F @Temperature 32.0 - 1110 °F	
Thermal Conductivity	22.0 W/m-K @Temperature <=20.0 °C	153 BTU-in/hr-ft²-°F @Temperature <=68.0 °F	

Thermal Properties	Metric	English	Comments
	25.0 W/m-K	174 BTU-in/hr-ft²-°F	
	@Temperature <=200 °C	@Temperature <=392 °F	
Melting Point	1150 - 1170 °C	2100 - 2140 °F	
Solidus	1150 °C	2100 °F	
Liquidus	1170 °C	2140 °F	

Optical Properties	Metric	English	Comments
Reflection Coefficient, Visible (0-1)	0.700	0.700	Relative to Silver = 1

Component Elements Properties	Metric	English	Comments
Copper, Cu	61 %	61 %	
Nickel, Ni	25 %	25 %	
Other	2.5 %	2.5 %	
Zinc, Zn	11.5 %	11.5 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000351 - 0.0000400 ohm-cm	0.0000351 - 0.0000400 ohm-cm	

Descriptive Properties	Value	Comments
Color	Whiteish bluish	
Non Magnetism request	1E-05	OERSTED
Temperature Coefficient	0.00025	K-1

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