

CMW® 28 Copper Alloy

Category : Metal , Nonferrous Metal , Copper Alloy

Material Notes:

CMW® 28 material is a copper base alloy having very high electrical and thermal conductivity and medium strength and toughness. It is a heat treatable alloy and develops its strength and hardness through a combination of heat treatment and cold working. In more massive sections it will have reduced strength and hardness. CMW® 28 material is supplied in rod form. CMW® 28 material is used very successfully in the form of resistance welding electrodes. It is recommended for the welding of coated steel and materials of high conductivity excluding silver and copper. CMW® 28 material has a machinability rating of 20 with free cutting brass being 100. Information provided by CMW Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CMW-28-Copper-Alloy.php

Physical Properties	Metric	English	Comments
Density	8.89 g/cc	0.321 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	70	70	Rod
	@Diameter <=15.9 mm	@Diameter <=0.625 in	
Tensile Strength, Ultimate	455 MPa	66000 psi	Rod
	@Diameter <=15.9 mm	@Diameter <=0.625 in	
Tensile Strength, Yield	386 MPa	56000 psi	Rod
	@Diameter <=15.9 mm	@Diameter <=0.625 in	
Elongation at Break	10 %	10 %	Rod
	@Diameter <=15.9 mm	@Diameter <=0.625 in	
Modulus of Elasticity	130 GPa	18900 ksi	Bar, Rod & Strip

Thermal Properties	Metric	English	Comments
CTE, linear	16.3 µm/m-°C	9.06 µin/in-°F	
	@Temperature 100 °C	@Temperature 212 °F	
Thermal Conductivity	367 W/m-K	2550 BTU-in/hr-ft ² -°F	
Melting Point	980 - 1080 °C	1800 - 1980 °F	
Solidus	980 °C	1800 °F	
Liquidus	1080 °C	1980 °F	
Softening Point	500 °C	932 °F	Permanent Softening

Component Elements Properties	Metric	English	Comments
Copper, Cu	99.85 %	99.85 %	
Zirconium, Zr	0.15 %	0.15 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000192 ohm-cm	0.00000192 ohm-cm	Bar & Rod (90 % IACS)

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