

CMW® ELKALOY D120 Copper Alloy, Aluminum Bronze

Category : Metal , Nonferrous Metal , Copper Alloy , Bronze

Material Notes:

ELKALOY® D alloys are aluminum bronze type casting alloys. The sequence, ELKALOY® D, D110, D120, D130 materials represents increasing hardness and abrasion resistance but reduced electrical and thermal conductivity and ductility. ELKALOY® D120 material is recommended for heavy-duty butt or flash welding jaws, clamps and dies. It is also used for machine parts to resist heavy pressure and extreme wear. It is a superior material as a guide bushing for automatic arc welders, heavy-duty bearings slides and gibbs when used in contact with steel. Information provided by CMW Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CMW-ELKALOY-D120-Copper-Alloy-Aluminum-Bronze.php

Physical Properties	Metric	English	Comments
Density	7.50 g/cc	0.271 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	95	95	
Tensile Strength, Ultimate	586 MPa	85000 psi	
Tensile Strength, Yield	276 MPa	40000 psi	
Elongation at Break	4.0 %	4.0 %	
Reduction of Area	3.0 %	3.0 %	
Modulus of Elasticity	97.0 GPa	14100 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 µm/m-°C	10.0 µin/in-°F	
	@Temperature 100 °C	@Temperature 212 °F	
Thermal Conductivity	71.0 W/m-K	493 BTU-in/hr-ft ² -°F	
Melting Point	1025 - 1060 °C	1877 - 1940 °F	
Solidus	1025 °C	1877 °F	
Liquidus	1060 °C	1940 °F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	11.6 %	11.6 %	
Beryllium, Be	0.50 %	0.50 %	

Component Elements Properties	Metric 85 %	English 85 %	Comments
Copper, Cu	81.45 - 82.5 %	81.45 - 82.5 %	
Iron, Fe	3.9 %	3.9 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000172 ohm-cm	0.0000172 ohm-cm	10 % IACS

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