

Materion PROtherm® Beryllium Copper Alloy

Category : Metal , Nonferrous Metal , Beryllium Alloy , Copper Alloy

Material Notes:

Description: moldMAX® and PROtherm® are Brush Wellman's copper beryllium alloys specifically designed for the plastic processing industry. These alloys provide a combination of thermal conductivity and strength, which allow for :Shorter cycle times and reduced part costsImproved part quality leading to a substantially lower scrap rate3 times faster machining rates resulting in lower cost molds and shorter delivery timesProcessing that is similar to tool steels with no substantial processing changes requiredOne million + cycles leading to lower maintenance costsA reduction in cost for MoldmakersReduced cost and high part quality at a lower piece price for MoldersPROtherm® provides the highest thermal conductivity available in a mold material... ten times greater than steel and twice that of aluminum. PROtherm® also offers a hardness and strength that exceeds aluminum. PROtherm® is specifically designed for foam processing; core caps, hot runner systems and other applications where maximum heat removal or control are required.Information supplied by Brush Wellman Engineered Materials.Brush Engineered Materials Inc. changed its name to Materion Corporation in March 2011.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Materion-PROtherm-Beryllium-Copper-Alloy.php

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	96	96	
Tensile Strength, Ultimate	793 MPa	115000 psi	
Elongation at Break	18 %	18 %	
Compressive Yield Strength	621 MPa	90000 psi	
Charpy Impact	67.8 J	50.0 ft-lb	V-Notch

Thermal Properties	Metric	English	Comments
CTE, linear	17.6 µm/m-°C	9.80 µin/in-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	251 W/m-K	1740 BTU-in/hr-ft²-°F	

Component Elements Properties	Metric	English	Comments
Beryllium, Be	0.50 %	0.50 %	
Copper, Cu	99.5 %	99.5 %	

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