

Schmolz + Bickenbach MoldMAX HH[®] High Hard - Copper Alloy

Category : Metal , Nonferrous Metal , Copper Alloy

Material Notes:

Description: Brush Wellman's MoldMAX HH[®] (High Hard) is the premier copper mold alloy. This alloy has a hardness and strength comparable with standard tool steels but its thermal conductivity is at four to six times higher. MoldMAX HH[®] is used for injection mold cores and cavities and blow mold pinch-offs. Its high hardness provides durability in applications where other high conductivity copper alloys fail. The alloy resists galling against other mold alloys, including itself. Information provided by Schmolz + Bickenbach

Order this product through the following link:

http://www.lookpolymers.com/polymer_Schmolz-Bickenbach-MoldMAX-HH-High-Hard-Copper-Alloy.php

Physical Properties	Metric	English	Comments
Density	8.36 g/cc	0.302 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	40	40	
Tensile Strength, Ultimate	1170 MPa	170000 psi	
Tensile Strength, Yield	1000 MPa @Strain 0.200 %	145000 psi @Strain 0.200 %	
Elongation at Yield	5.0 %	5.0 %	
Modulus of Elasticity	131 GPa	19000 ksi	
Fatigue Strength	>= 310 MPa @# of Cycles 1.00e+7	>= 45000 psi @# of Cycles 1.00e+7	(R=-1)
Impact Test	6.78 J	5.00 ft-lb	

Thermal Properties	Metric	English	Comments
CTE, linear	17.5 Åµm/m-Å°C	9.70 Åµin/in-Å°F	
Specific Heat Capacity	0.418 J/g-Å°C @Temperature 100 Å°C	0.100 BTU/lb-Å°F @Temperature 212 Å°F	
Thermal Conductivity	10.8 W/m-K @Temperature 100 Å°C	75.0 BTU-in/hr-ftÅ²-Å°F @Temperature 212 Å°F	
Melting Point	>= 871 Å°C	>= 1600 Å°F	approximate
Solidus	871 Å°C	1600 Å°F	approximate

Component Elements Properties	Metric	English	Comments
Beryllium, Be	1.6 - 2.0 %	1.6 - 2.0 %	
Cobalt, Co	0.20 - 0.30 %	0.20 - 0.30 %	
Copper, Cu	97.7 - 98.2 %	97.7 - 98.2 %	

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