MATERION

Data Sheet

MoldMAX LH® Alloy

Materion's MoldMAX LH (Low Hard) alloy is a premium copper mold alloy that provides hardness and strength comparable with standard AISI P-20 tool steel and a thermal conductivity five-times higher. MoldMAX LH alloy is used for injection mold cores and cavities where moderate hardness and high toughness and conductivity are required.

Chemical Composition (Weight Percent)

Alloy	Beryllium	Cobalt	Copper
MoldMAX LH Alloy	1.6 - 2.0	0.2 - 0.3	Balance

Typical Physical Properties

Elastic Modulus	Melting Point (Solidus)	Density	Thermal Expansion (20 – 200 °C)	Thermal Conductivity (100 °C)	Heat Capacity (100 °C)
19,000 ksi 131 GPa	~1600 °F ~870 °C	0.302 lb/in^3 8.36 g/cm^3	9.7 x 10^{-6} in/in °F 17.5 x 10^{-6} °C^{-1}	90 BTU/hr·ft·°F 155 W/m·°C	0.10 BTU/lb·°F 0.41 J/g·°C

Typical Mechanical Properties*

0.2% Offset Yield Strength	Ultimate Tensile Strength	Fatigue Strength 10^7 Cycles (R=-1)	Elongation	Impact Strength	Hardness
110 ksi 760 MPa	140 ksi 965 MPa	> 45 ksi > 310 MPa	15%	12 ft·lb 16 J	30 HRC

*Properties may vary by shape and thickness.

Forms Available

Rounds, square and rectangular bars, plate and forged rings.

Related Information

Additional technical information on MoldMAX® products can be obtained by visiting MoldMax.com or by calling +1.800.375.4205. For pricing and availability in North America, contact a sales location.

Health and Safety

Processing beryllium-containing alloys poses a health risk if safe practices are not followed. Inhalation of airborne beryllium can cause serious lung diseases in some individuals. Occupational safety and health regulatory agencies worldwide have set mandatory limits on occupational respiratory exposures. Read and follow the guidance in the Safety Data Sheet (SDS) before working with this material. The SDS and additional important beryllium health and safety information and guidance can be found at berylliumsafety.com, berylliumsafety.eu and Materion.com. For questions on safe practices for beryllium-containing alloys, contact the Materion Product Stewardship Group at +1.800.862.4118 or contact us by email at Materion-PS@Materion.com.

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