

MoldMAX LH[®] Alloy

Materion Performance Alloys' 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

PHYSICAL PROPERTIES

Elastic Modulus	Melting Point (Solidus)	Density	Thermal Expansion	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	9.7x10 ⁻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 0.42 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%	15 ft · lb 20 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 www.MoldMax.com or by calling 800-375-4205 (USA). For pricing and availability in North America, contact the sales location listed.

Safe Handling of MoldMAX or PROtherm Copper Beryllium Alloys

Handling copper beryllium alloys in solid form poses no special health risk. Like many industrial materials, beryllium-containing materials may pose a health risk if recommended safe handling practices are not followed. Inhalation of airborne beryllium may cause a serious lung disorder in susceptible individuals. The Occupational Safety and Health Administration (OSHA) has set mandatory limits on occupational respiratory exposures. Read and follow the guidance in the Safety Data Sheet (SDS) before working with this material. For additional information on safe handling practices or technical data on copper beryllium contact Materion Performance Alloys Customer Technical Service Department at 800-375-4205.

North American Service Centers – Sales Inquiries

For bar, tube, plate/sheet >0.060” (1.5 mm) thick
and rod >0.5” (12.7 mm) diameter:

Warren, MI

TOLL FREE: 800-521-8800
PHONE: +(1) 586-772-2700
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International Sales Offices

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MATERION CORPORATION

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AD0059_0817

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