

# MOLDMAX BeCu

WROUGHT ROD & PLATE



MATERION



James Coppel Lee

**Moldmax** : Beryllium Copper Alloy. High Strength, High Hardness and Wear resistance, Excellent Corrosion Resistance, Very Good Thermal Properties.

For: Injection Moulds, Core Cavity Inserts, Blow Mould Pinch Offs, Neck Rings, Handle Inserts, Hot Runner systems, Injection Nozzles and Manifolds.

## INCREASED CYCLE TIMES FOR PLASTIC MOULDING

**Moldmax** : Provides strength and wear resistance similar to many tool steels , but with thermal conductivity up to ten times greater than steel.

Through the unique combination of thermal conductivity and strength **Moldmax** gives:

- Shorter Cycle Time
- Improved Plastic Part Dimensional Control.
- Better Parting Line Maintenance
- Mated with a variety of materials.

MOLDMAX Chemical Composition		
Copper %	Beryllium %	Cobalt %
REM	1.6 – 2.0	0.2 – 0.3

Moldmax Typical Mechanical Properties					
Temper	Tensile Strength	Yield Strength	Elongation (%)	Hardness	
High Hard HH	170 Ksi	145 KSi	5	RC 40	
	1170 MPa	1000 MPa	5	BH 373	
Low Hard LH	140 Ksi	110 Ksi	15	RC 30	
	965 MPa	760 MPa	15	BH 277	

Moldmax Physical Properties					
Elastic Modulus	Melting Point ( Solidus )	Density	Thermal Expansion	Thermal Conductivity ( 100 C )	Heat Capacity (100 o C )
19,000 Ksi	- 1600 o F	0.302 lb/in <sup>3</sup>	9.7x 10 <sup>-6</sup> oF-1	90 BTU/ hr ft o F	0.10 BTU/ lb oF
131 GPa	-- 870 o C	8.36 g/cm <sup>3</sup>	1.75 x 10 <sup>-5</sup> oC-1	155 W/m-K	0.44 x J/g.K