

MoldMAX V®

Materion Brush Performance Alloys' MoldMAX V (MMV) is a high conductivity, moderately high strength, copper nickel silicon chromium alloy. Applications include injection mold and blow mold cores and cavities.

CHEMICAL COMPOSITION (weight percent)

Alloy	Nickel	Silicon	Chromium	Copper
MoldMAX V	6.6 – 7.5	1.5 – 2.5	0.6 – 1.2	Balance

PHYSICAL PROPERTIES

Elastic Modulus	Melting Point (Solidus)	Density	Thermal Expansion	Thermal Conductivity (100 °C)	Heat Capacity (100 °C)
18,500 ksi 130 GPa	~1800 °F ~980 °C	.314 lb/in ³ 8.69 g/cm ³	9.72x10 ⁻⁶ in/in °F 17.5 x 10 ⁻⁶ °C ⁻¹	92 BTU/hr·ft·°F 160 W/m·K	.098 BTU/lb·°F 0.41 J/g·K

TYPICAL MECHANICAL PROPERTIES*

Product Size Range	0.2% Offset Yield Strength	Ultimate Tensile Strength	Fatigue Strength 10 ⁷ Cycles (R=-1)	Elongation	Impact Strength	Hardness
Rod	105 ksi 725 MPa	125 ksi 860 MPa	40 ksi 275 MPa	7%	5 ft·lb 7 J	270 HBS (28 HRC)
Plate ≤ 4.5 in ≤ 114 mm	105 ksi 725 MPa	125 ksi 860 MPa	40 ksi 275 MPa	7%	5 ft·lb 7 J	250 HBS minimum
Plate > 4.5 in > 114 mm	105 ksi 725 MPa	125 ksi 860 MPa	40 ksi 275 MPa	7%	5 ft·lb 7 J	220 HBS minimum

*Hardness is tested via Brinell Test Method at 3000 kgf load and equivalent HRC values converted per ASTM-E-140, Table 1
Properties may vary by shape and thickness.

FORMS AVAILABLE

Rounds, plates, and parts finished machined per customer drawings.

RELATED INFORMATION

Additional technical information on MoldMAX products can be obtained by calling 800-375-4205.

North American Service Centers – Sales Inquiries

For strip and small diameter rod and wire:

Elmhurst, IL

TOLL FREE: 800-323-2438

LOCAL: +(1) 630-832-9650

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For Rod, bar, tube and plate:

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MATERION CORPORATION

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