

M-2 Data Sheet

*Chemical Composition (Nominal Values Weight %)

<u>C</u>	<u>Cr</u>	<u>V</u>	<u>Mo</u>	<u>W</u>
0.85	0.85	2.00	5.00	6.40

*Composition shown is nominal. Actual chemical composition may vary.

Characteristics

M-2 is a high speed steel which provides a good combination of high hardness, moderate toughness, and high heat/wear resistance.

Applications

M-2 is suitable for hot and cold punch and die applications and cutting tool applications.

Heat Treatment of M-2

Annealing

M-2 should be heated thoroughly to 1600°F in an atmosphere controlled furnace. Hold 2 hours, furnace cool at 25°F per/hr to 1100°F, then air cool to room temperature. A maximum hardness of 235 BHN should result.

Hardening

Preheat: 1400-1500°F, equalize temperature, hold 2 hours.
Austenitize: 1975-2200°F, equalize temperature, hold 30 minutes.

Quench: Positive pressure (2 bar minimum) quench to below 125°F.

Temper: Double temper at 1000-1200°F, equalize temperature, hold 2 hours minimum. Double temper recommended.

Typical hardness: 60-65 HRC.

Stress Relieving

Annealed material: Heat to 1000-1200°F, hold 2 hours, then air cool.

Hardened material: Heat to 25-50°F below heat treat tempering temperature, hold 2 hours, then air cool.

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Hardened material: Heat to 25-50°F below heat treat tempering temperature, hold 2 hours, then air cool.