

# M-2 Data Sheet

## \*Chemical Composition (Nominal Values Weight %)

C	Cr	V	Mo	W
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.

#### EDM

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