M2 :- High speed steel tool is a general purpose molybdenum-type high-speed steel exhibiting well-balanced toughness, wear-resistance and red hardness properties. This grade is commonly used in cold work punches and dies and cutting applications involving high-speed and light cuts.

STANDARDS

- USA: AISI M2
- France: AFNOR Z85WDCV6.5.4.2
- Japan: JIS SKH51
- Sweden: SS 2722
- Germany: 1.3343
- Europe: HS 6-5-2
- UK: BM2

CHEMICAL COMPOSITION

	C	Cr	SI	Mn	Mo	W	V	P	S
Min	0.86	3.75	0.20	0.20	4.50	5.50	1.70	--	--
Typical	**0.9**	**4.00**	**0.30**	**0.30**	**5.00**	**6.00**	**1.90**		
Max	0.94	4.50	0.40	0.40	5.50	6.70	2.10	0.035	0.035

APPLICATIONS

- Twist Drills
- Knives
- Broaches
- Reamers
- Taps and dies
- Milling cutters
- Saws
- Cold work tools

FORM SUPPLIED

- Drawn wire
- Discs
- Round bars
- Bi-metal edges
- Square bars
- Sheets
- Flat bars
- Strips
- Wire rod

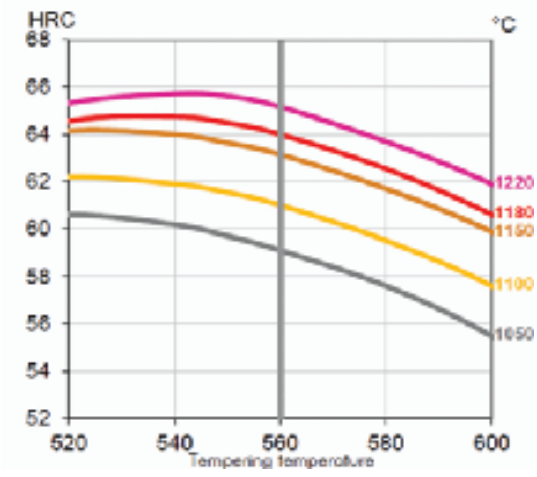
Available surface conditions : drawn, ground, hot rolled, cold rolled, peeled, turned.

HEAT TREATMENT

- Stress-releiving at 600 °C to 700 °C for approximately 2 hours, slow cooling down to 500 °C.
- Soft Annealing in a protective atmosphere at 850-900 °C for 3 hours, followed by slow cooling 10 °C per hour down to 700 °C, then air cooling.
- Hardening in a protective atmosphere with pre-heating in 2 steps at 450-500 °C and 850-900 °C and austenitising at a temperature suitable for chosen working hardness. 2 tempers at 560 °C are recommended with atleast 1 hour holding time, each time.

Tool	Hardening	Tempering
single edge cutting tools	**1220 °C**	**560 °C**
multi edge cutting tools	**1180-1220 °C**	**560 °C**
cold work tools	**1050-1150 °C**	**560 °C**

GUIDELINES FOR HARDENING



Processing

M2 can be worked as follows :

» Machining(grinding,turning,milling)
» Polishing
» Hot forming
» Electrical discharge machining
» Welding(special procedure incl. pre-heating & filler materials of base material composition)

Grinding

During Grinding, local heating of the surface, which can alter the temper, must be avoided. Grinding wheel manufacturers can provide advise on the choice of grinding wheels.

Surface treatment

The Steel Grade is a perfect substrate material for PVD coating. If nitriding is requested, a small diffusion zone is recommended but avoid compound and oxidized layers.

Delivery hardness

» Typical soft annealed hardness is 250 HB

» Cold drawn and cold rolled material is typically 10-40 HB harder

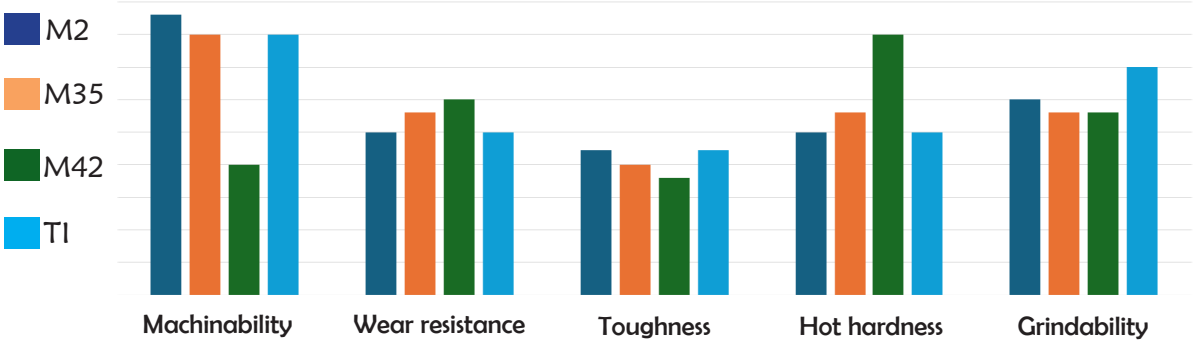
Sizes available

ROUND	Starting From	Upto
DIAMETER	8 mm	500 mm
LENGTH	2000 mm	6000 mm

SQUARE BAR	Starting From	Upto
SIZE	8x8 mm	250x250 mm

FLAT	Starting From	Upto
THICKNESS	4 mm	205 mm
WIDTH	20 mm	400 mm

Comparative properties



Contact us at:

+91-1762-281009

info@sadashivsteel.com

Pandwala Road,Village Mubarikpur, Near Derabassi, District: Mohali. Punjab - 140201

www.sadashivsteel.com