

D2KNL is a modified version of D2 tool steel with better wear resistance and toughness. D2KNL has a Vickers hardness of 748, an Izod impact unnotched of 77.0 J, a Poisson's ratio of 0.27-0.30, and an elastic modulus of 190-210 GPa.

STANDARDS •

- » 1.2601
- » X165CrMoV12
- » SAE J438
- » FED QQ-T-570
- » B.S. BD 2
- » ASTM A681

CHEMICAL COMPOSITION •

	C	Cr	Si	Mn	Mo	V	W	P	S
Min	1.40	11.00	0.20	0.20	0.50	0.10	0.40	--	--
Typical	1.50	12.00	0.40	0.35	0.60	0.20	0.50		
Max	1.60	13.00	0.60	0.50	0.70	0.30	0.60	0.035	0.035

APPLICATIONS •

- » Blanking Dies
- » Forming Dies
- » Thread forming Dies
- » Punches

FORM SUPPLIED •

- » Round Bars
- » Flat Bars
- » Plates
- » Blocks
- » Hot rolled Rounds
- » Squares
- » Drill Rod
- » Drawn Rounds

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

HEAT TREATMENT •

● Heat treatment-

D2 steels should be preheated very slowly up to 815°C (1500°F), then temperature should be increased to 1009°C (1850°F) and held for 20 to 45 minutes.

Then they are air quenched.

● Forging-

Forging of D2 steels can be done at 1065°C (1950°F) down to 1750°F. Do not forge below 926°C (1700°F)

● Annealing-

Annealing of D2 steels should be done at 886°C (1627°F) followed by slow furnace cooling at 4°C (40°F) per hour or less.

● Tempering-

D2 steels can be tempered at 204°C (400°F) for achieving Rockwell C hardness of 61 and at 537°C (1000°F) for a Rockwell C hardness of 54

Tool	Hardening	Tempering
single edge cutting tools	1220 °C	550-570 °C
multi edge cutting tools	1180-1220 °C	550-570 °C
cold work tools	1050-1150 °C	550-570 °C

DELIVERY HARDNESS . _____

- » Typical soft annealed hardness is 220 HB
- » Cold drawn and cold rolled material is typically 10-40 HB harder

PROCESSING . _____

D2KNL 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.

SIZES AVAILABLE . _____



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

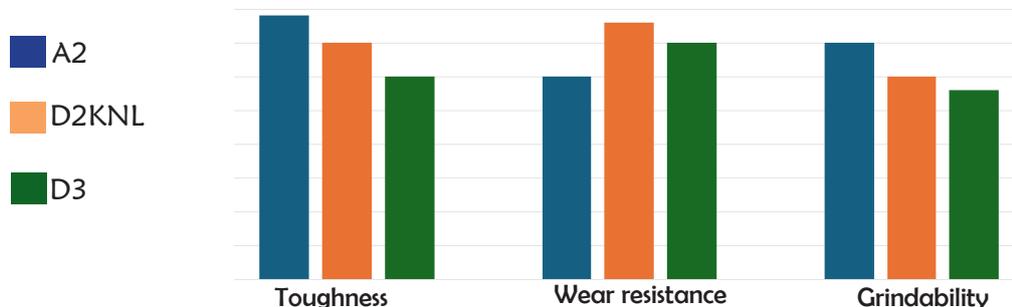


SQUARE BAR	Starting From	Upto
SIZE	8x8 mm	250x250 mm
LENGTH	2000 mm	6000 mm



FLAT	Starting From	Upto
THICKNESS	4 mm	205 mm
WIDTH	20 mm	400 mm
LENGTH	2000 mm	6000 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