

DB6 is highly recommendable for Close Die Forgings due to its characteristics of high wear-resistance, extra toughness, high hardness which is achieved with Cr-Ni-Mo-V high graded alloys. DB6 Steel is a tool steel grade that comes under the DIN EN ISO 4957 standard. Due to its excellent combination of wear resistance, additional toughness, and high hardness which are attained using Cr-Ni-Mo-V high graded alloys, DB6 Steel is highly recommended for Close Die Forgings.

STANDARDS •

- » USA: AISI L6
- » France: AFNOR 55NCDW7
- » Germany: 1.2714
- » Europe: 55NiCrMoV

CHEMICAL COMPOSITION •

	C	Cr	Si	Mn	Mo	V	Ni	P	S
Min	0.50	1.00	0.10	0.65	0.45	0.07	1.50	--	--
Typical	0.55	1.10	0.25	0.80	0.50	0.095	1.65		
Max	0.60	1.20	0.40	0.95	0.55	0.12	1.80	0.035	0.035

APPLICATIONS •

- » Dies
- » Moulds
- » Tools
- » Bearings
- » Rolls
- » Blades
- » Piston Rods
- » Punches

FORM SUPPLIED •

- » Round bar
- » Hexagonal Bar
- » Flats
- » Sheets
- » Square Block

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

HEAT TREATMENT •

● Stress relieving:

Heat the component to 600–650°C, soak for two hours per 25 mm of section, and cool to 500°C in a boiler.

● Hardening:

Preheat to 650°C, then quickly raise the temperature to 900–950°C and quench in oil.

● Annealing:

Soak Thoroughly at 740-760 °C before furnace cooling at a maximum rate of 10 °C per hour down to 600 °C followed by cooling in air.

● Forging:

Gradually warm up to 700°C, then quickly raise the temperature to 1050°C. Keep forging over 800°C, then slowly cool in a furnace or vermiculite.

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 360-430 BHN
- » Cold drawn and cold rolled material is typically 10-40 HB harder

PROCESSING .

DB6 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

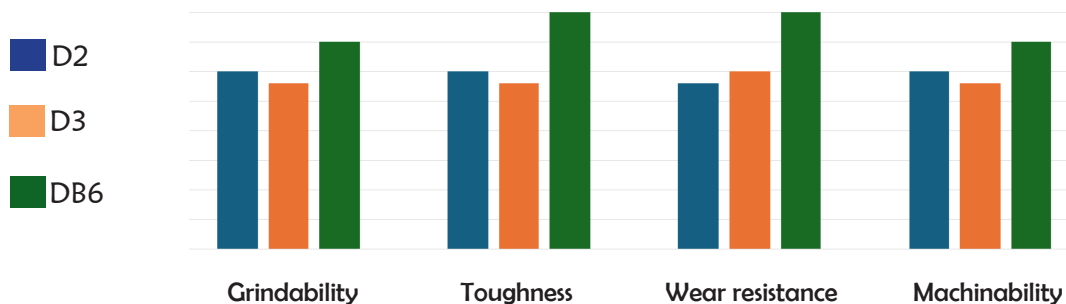


SQUARE BAR	Starting From	Upto
SIZE	8x8 mm	250x250 mm



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

COMPARATIVE PROPERTIES .



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