

SKD6 Steel is a hot work tool steel. SKD6 is equivalent with AISI H11, GB 4Cr5MoSiV and DIN [1.2343](#) Tool Steel. SKD6 Tool Steel consists of chromium, molybdenum and vanadium and is known for its high hardenability and great toughness.

SKD6 tool steel than AKD61 tool steel only less Reduced the Vanadium composition. H13 steel have 0.6-1.2% Vanadium, SKD6 steel Vanadium composition only have 0.3-0.6%.

The molybdenum and vanadium act as strengthening agents while the chromium content helps the SKD-6 tool steel to withstand softening when used at high temperatures. It also combines shock and abrasion resistance, has good red hardness, can resist rapid cooling and withstand premature heat checking. The SKD6 tool steel has good machinability, good weldability and good ductility and it can be formed by conventional means. So SKD6 tool steel applications is very range in hot forged mold, hot work tool.

Related Specifications ASTM A681-1999

Chemical composition

C (%)	0.32~ 0.45	Si (%)	0.80~ 1.20	Mn (%)	0.20~ 0.50
P (%)	≤0.030	S (%)	≤0.030	Cr (%)	4.75~ 5.50
Mo (%)	1.10~ 1.75	V (%)	0.30~ 0.60		

Equivalent Of SKD6 hot work alloy tool steel

USA	Germany	China	Japan	France	England	Italy	Austria	Sweden	Spain
ASTM/AISI/ SAE/UNS	DIN,WNr	GB	JIS	AFNOR	BS	UNI	ONORM	SS	UNE
H11 / T20813	X38CrMoV5- 1/ 1.2344	4Cr5MoSiV	SKD6	X38CrMoV5 / Z38CDV5	BH11	X37CRMO V51KU			X37CR MOV5

Form of Supply

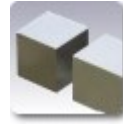
SKD6 tool steel, we can supply the round bar, flat bar, plate and square block. round bar can be sawn to your required lengths as one offs or multiple cut pieces. Steel plate and sheet rectangular pieces can be sawn from flat bar, sheet or plate to your specific sizes. Ground tool steel bar can be supplied, providing a quality precision finished bar to tight tolerances.



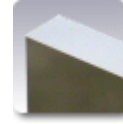
Round



sheet



Square



Plate

Applications

SKD6 Tool Steel is used in hot forging dies, hot forging die inserts, hot gripper dies, hot nut tools, hot header dies, brass forging and pressing dies, hot forging aluminum base dies, aluminum casting and extrusion dies, zinc die casting dies, extrusion mandrels, plastic molds, cores, die holder blocks, hot press dies, hot work punches, etc.

Regular size and Tolerance

Steel round bar: Diameter Ø 5mm - 3000mm

Steel plate: Thickness 5mm - 3000mm x Width 100mm - 3500mm

Steel Hexagonal bar: Hex 5mm - 105mm

1) Hot Rolled round bar			
Diameter (mm)	Diameter Tolerance (mm)	Diameter (mm)	Diameter Tolerance (mm)
6.4~15.8	-0.038 ~0.038	181~<206.2	0~1.6
15.8~<77.6	0~0.10	206.2~<257	0~2.4
77.6~<103	0~0.15	257~<307.7	0~3.2
103~<181	0~0.78	≥307.7	0~4.7
2) Hot Rolled steel plate			
Thickness (mm)	Thickness Tolerance (mm)	Thickness (mm)	Thickness Tolerance (mm)
≤25.4	-0.41~0.79	>127~152	-1.60~2.39
>25.4~76	-0.79~1.19	>178~254	-1.98~3.18

>76~127	-1.19~1.60	>254~305	-2.39~3.96
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Others have not specified size, pls contact our experienced sales team.

Heat treatment Related

① Annealing of SKD6 Tool steel

Slowly heated to 750-780 °C and allow enough times, let the steel to be thoroughly heated, Then cool slowly in the furnace. The SKD6 steel will get MAX 250 HB (Brinell hardness) .

② Hardening of tool steel JIS SKD6

SKD6 steels should be heated uniformly to 1020-1060°C. until completely heated through. If needed, the steels can be preheated at 300-500°C (572-932°F). About 30 min per 25 mm of ruling section is to be provided and then the steels should be immediately quenched in oil or air.

③ Forging of SKD6 tool steel

Heat to 1100 °C, start forged, the forging temperature no below 900 °C

④ Tempering of SKD6 tool steel

Tempering of SKD6 steels is performed at 550-650°C, Soak well at the selected temperature and soak for at least one hour per 25mm of total thickness. Get Rockwell C hardness of 56 to 38.

Temperature [°C]	400	500	550	650
Hardness [HRc]	53	56	54	47

Mechanical Properties

Tensile strength, ultimate (@20° C/68° F, varies with heat treatment)	Tensile strength, ultimate (@20° C/68° F, varies with heat treatment)	Reduction of area (@20° C/68° F)	Modulus of elasticity (@20° C/68° F)	Poisson's ratio
MPa	MPa		Gpa	
1200-1590	1000-1380	50%	215	0.27-0.30

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The mechanical properties of SKD6 tool steels are outlined in the following table.

MPa	MPa		Gpa	0.27-
1200-1590	1000-1380	50%	215	0.30

Processing

SKD6 Tool Steel round bar and flat sections can be cut to your required sizes. SKD6 steel ground bar can also be supplied, providing a high quality tool steel precision ground tool steel bar to your required tolerances. SKD6 Tool Steel is also available as Ground Flat Stock / Gauge Plate, in standard and nonstandard sizes.

Contact our experienced sales team to help you with your SKD6 tool steel questions and inquiry by [Email](#) or Telephone. The questions and inquiry will be reply in 24 hours.

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