

OTAI SPECIAL STEEL is STD5 steel stockholders and suppliers from china. more 16 years experience in JIS STD5 tool steel round bar, flat bar and plate supply.

JIS STD5 Steel is a high quality Hot work tool steel, It belong to the high quality high carbon alloy tool steel. Oil Quenched & Tempered Hardenss is 28-34 HRC. JIS STD5 steel Annealing delivery hardenss less than 250HB.

Related Specifications ASTM A29/A29M DIN EN 10083/3 JIS G4404 GB/T 3077

Form of Supply

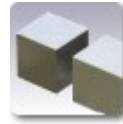
JIS STD5 tool steel, we can supply the round bar, steel flat bar, plate, steel sheet, hexagonal steel bar and steel square block. JIS STD5 steel Round bar can be sawn to your required lengths as one offs or multiple cut pieces. STD5 steel Rectangular pieces can be sawn from flat bar or plate to your specific sizes. Ground tool steel bar can be supplied, providing a quality precision finished bar to tight tolerances.



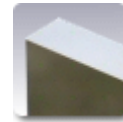
Round



sheet



Square



Plate

Chemical composition

C(%)	0.25~0.35	Si(%)	≤0.40	Mn(%)	≤0.60	P(%)	≤0.030
S(%)	≤0.30	Cr(%)	2.00~3.00	V (%)	0.30~0.50	W(%)	9.00~10.0

Material equivalent of STD5 steel

USA	Germany	China	Japan	France	England	Italy	Poland	Czechia	Austria	Sweden	Spain
AISI/UNS	DIN, WNr	GB	JIS	AFNOR	BS	UNI	PN	CSN	ONORM	SS	UNE
H21 / T20821	X30WCrV9-3 1.2581	3Cr2W8V	SKD5	X30WCrV9	BH21	X30WCR V93KU				2730	X30WCRV9

STD5 steel Heat treatment Related

- **Forging Of STD5 steel-hot work alloy tool steel**
Heat to 900-1100 ° C(1652-2012°F), forged temperature not below 843°(1550°F)
- **Annealing of STD5 Tool steel**

Slowly heated to 800~850 °C (1472~1562° F) and allow enough times, let the steel to be thoroughly heated, Then cool slowly at Maximum of 4°C (40° F) per hours. The STD5 tool steel will get MAX 235 HB (Brinell hardness) .

- **Hardening of STD5 tool steel**

STD5 steels should be heated uniformly to 1050-1100°C (1922-2012°F) 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 air.

- **Tempering of STD5 tool steel**

Tempering of STD5 steels is performed at 600-650°C (212-662°F), Soak well at the selected temperature and soak for at least one hour per 25mm of total thickness. Get Rockwell C hardness of 50 MAX..

Mechanical Properties

The mechanical properties of STD5 tool steels are outlined in the following table.

Elastic modulus (@399°C/750°F, hardened to 62 HRC)	Elastic modulus (hardened to 62 HRC)	Yield (0.2%, hardened to 55 HRC)	Yield (0.2%, hardened to 60 HRC)	Yield (0.2%, hardened to 62 HRC)	Yield (0.2%,hardened to 50 HRC)
GPa	GPa	Mpa	Mpa	Mpa	MPa
172	193	1800	2150	2200	1350

Applications of H21 Tool Steel-Tungsten Hot-Work Steel

STD5 Hot work steels are Suitable for the manufacture of complex shapes, impact load, the working temperature is not too high, mold sheet product is suitable for forging press mold, concave and convex die, die casting, hot metal cutting knife, etc. the mass production with aluminum alloy die-casting mould.

STD5 tool steel Regular size and Tolerance

hot rolled STD5 steel bar: Ø5mm-200mm

Forging STD5 steel bar: Ø140mm-3000mm

Hot rolled STD5 steel plate: Thickness 10mm-200mm x width 100-2300mm

Forged STD5 material steel plate: Thickness 150-1500mm x Width 100 x 3000mm

Others STD5 have not specified size, pls [contact](#) our experienced sales team.

Processing

JIS STD5 tool steel round bar and flat sections can be cut to your required sizes. STD5 tool steel ground bar can also be supplied, providing a high quality tool steel precision

ground tool steel bar to your required tolerances. JIS STD5 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 STD5 tool steel questions and enquiry by [Email](#) or Telephone. The questions will be reply in 24 hours.

OTAI SPECIAL STEEL CO., LTD

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