

The X40CrMoV5-1 steel is a hot work tool Steel. It is known for its balanced combination of abrasion resistance, toughness and good red hardness. A chrome-molybdenum hot work alloy tool steel, X40CrMoV5-1 hot work tool steel is used in a variety of applications and worldwide. X40CrMoV5-1 hot work tool steel is the most popular hot work steel because of its superior qualities and economical cost. As a result of its low carbon content, NF X40CrMoV5-1 hot work tool steel has an outstanding combination of toughness properties and abrasion resistance when correctly hardened and tempered.

Related Specifications NF A 35-590-1992 | ASTM A681 | EN ISO 4957 | JISG4401 |

Related Specifications and Equivalent of X40CrMoV5-1 hot work tool steel with others

Hot work tool steel Material Standard

Country	American	Germany	Britain	Japanese	Chinese	Europe
Standard	ASTM A681	DIN W-Nr 17350	BS4659	JIS G4401	GB/T 9943-2008	EN ISO 4957
Grades	H13	1.2344	BH13	SKH51	W6Mo5Cr4V2	X40CrMoV5-1

Chemical Composition contrast of NF X40CrMoV5-1 hot work tool steel with other Equivalent hot work alloy tool steel Material

Form of Supply

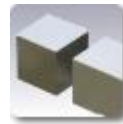
NF X40CrMoV5-1 hot work tool steel, we can supply the NF X40CrMoV5-1 hot work tool steel round bar, steel flat bar, steel plate and steel square block. NF X40CrMoV5-1 hot work tool steel round bar can be sawn to your required lengths as one offs or multiple cut pieces. NF X40CrMoV5-1 hot work tool steel Rectangular pieces can be sawn from flat bar or plate to your specific sizes. X40CrMoV5-1 Ground tool steel bar can be supplied, providing a quality precision finished bar to tight tolerances.



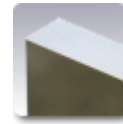
Round



sheet



Square



Plate

Regular size and Tolerance

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

Others have not specified size, pls contact our experienced sales team.

Heat treatment related specifications of NF X40CrMoV5-1 hot work tool steel

- **Annealing of NF X40CrMoV5-1 hot work tool steel**

NF X40CrMoV5-1 hot work tool steel annealing is recommended before Re-hardening. Heating the NF X40CrMoV5-1 hot work tool steel to Soak thoroughly at 840-860°C , Then furnace cooling at a rate of MAX 20°C per hour down to 600°C followed by cooling in air.

- **Stress Relieving of NF X40CrMoV5-1 hot work tool steel**

For get good Machinability, the Stress Relieving is very important. When NF X40CrMoV5-1 hot work tool steel are heavily machined or ground for moulds or tools products.it is recommended to stress relieve after machined and prior to hardening to Min the possibility of distortion. For stress relieve heating the component to 680-720°C and soak well about approximately 2 hours, then put in air cool. The moulds or tools products can be finish machined before heat treatment.

- **Hardening of NF X40CrMoV5-1 hot work tool steel**

First Pre-heating X40CrMoV5-1 steel to 785-805°C, Soak thoroughly, then heating 1000-1030°C. Soak about 30 Mins. Cool in air or oil. Large sections and block must be quenched in oil, for reduce decarburization, we strong recommend isothermal

molten salt bath treatment. Different climate and environment maybe impact the cool.
So we recommend you consult your heat treatment supplier.

- **Tempering of NF X40CrMoV5-1 hot work tool steel (X40CrMoV5-1 steel)**

Tempering for X40CrMoV5-1 steel. Uniformly and thoroughly heating to the selected tempering temperature and hold for at least 2 hours (one hour per inch(25.4mm)of total thickness). tempering range is 400-650°C depending on different hardness requirements and the work temperature of the tool and mould.

Temperature (°C)	400	500	550	600	650	
Hardness (°C)	54	56	54	49	47	

Applications

X40CrMoV5-1 Steel is used die casting dies for aluminum, magnesium and zinc, Aluminum and brass extrusion dies, liners, mandrels, pressure pads, followers, bolsters, die cases, die holders and adaptor rings for copper and brass extrusion. Hot forged die and Other thick wall plastic moulds, shear blades for hot work and hot swaging dies.

Processing

X40CrMoV5-1 tool Steel round bar and flat sections can be cut to your required sizes.
X40CrMoV5-1 Steel ground steel bar can also be supplied, providing a high quality tool steel precision ground tool steel bar to your required tolerances. X40CrMoV5-1 Steel also is available as Ground Flat Stock / Gauge Plate, in standard and nonstandard sizes as your require.

Contact

Pls Contact our experienced sales team to help you with your X40CrMoV5-1 Steel questions.by [Email](#) or Telephone. The questions will be reply in 24 hours!