


M35 Tool Steel | SKH55 | HS6-5-2-5 | 1.3243 High Speed Steel

AISI M35 Tool Steel is high cobalt high speed steel. M35 HSS containing cobalt high speed steel compared with low cost and easy processing, through the proper heat treatment, can get high hardness (HRC67-70), high hot hardness (625 °C for 4 hours and HRC63 ~ 65), and high wear resistance, toughness and bending strength were not lower than ordinary HSS, can overcome the mold edge collapse and early damage such as cracks

Supply Form of M35 Tool Steel -ASTM A681 High Speed Steel

			
Round	Plate	Sheet	Square

Supply Range of SAE M35 Tool Steel HSS

M35 Steel Round Bar: diameter 1mm – 400mm

M35 Steel Plate: thickness 1 –500mm x width 200– 1400mm

M42 Steel Block: 210mm x 500-810mm

Chemical Composition of M35 Tool Steel Material

ASTM A681	C	Si	Mn	P	S	Cr	Mo	V	w	Co
M35/ T11335	0.93	≤ 0.45	≤ 0.40	0.03 0 Max	0.03 0 Max	4.2	5.00	1.90	6.25	4.90
DIN 17350	C	Si	Mn	P	S	Cr	Mo	V	w	Co
1.3243/ S6-5-2-5	0.88 ~ 0.96	≤ 0.45	≤ 0.40	0.03 0 Max	0.03 0 Max	3.80 ~ 4.50	4.70 ~ 5.20	1.70 ~ 2.10	5.90 ~ 6.70	4.50 ~ 5.00
GB/T 9943	C	Si	Mn	P	S	Cr	Mo	V	w	Co

W6Mo5Cr4V2 Co5	0.80 ~ 0.90	0.20 ~ 0.45	0.15 ~ 0.40	0.03 0 Max	0.03 0 Max	3.75 ~ 4.50	4.50 ~ 5.50	1.75 ~ 2.25	5.50 ~ 6.50	4.50 ~ 5.50
JIS G4403	C	Si	Mn	P	S	Cr	Mo	V	w	Co
SKH55	0.87 ~ 0.95	≤ 0.45	≤ 0.40	0.03 0 Max	0.03 0 Max	3.80 ~ 4.50	4.70 ~ 5.20	1.70 ~ 2.10	5.90 ~ 6.70	4.50 ~ 5.00

M35 Tool Steel Material Equivalent and Related Specifications

USA	German	Japan	China	ISO
ASTM A681	DIN 17350	JIS G4403	GB/T 9943	ISO 4957
M35	1.3243	SKH55	W6Mo5Cr4V2Co5	HS6-5-2-5

SAE M35 Tool Steel Material Mechanical Properties

Hardness, Rockwell C (oil quenched on 1204°C, 5 minutes): 64.8 HRC.

Hardness, Rockwell C (oil quenched on 1177°C, 5 minutes): 65.2 HRC

Hardness, Rockwell C (oil quenched on 1163°C), 5 minutes: 65.2 HRC

Forged of M35 Steel metal material

Pre-Heating to 650-750°C, Then heat to forged temperature. Soak at 1050-1100 °C, ensure heat

thorough. Then start forged, the forged temperature no low than 950°C. After forging, cool slowly .

Heat Treatment of SAE M35 Steel

● M35 HSS Steel Annealing

Slowly heat to 871°C, then slowly Cool to 538°C(1000°F) in heat treatment furnace. Then

cool in air. After annealing hardness HBS: 269 Max

● M35 tool Steel Hardening

M35 steel having very high hardenability and should be hardened by cooling in still air. The use of a salt bath or controlled atmosphere furnace is desirable to minimize decarburization, and if not available, pack hardening in spent pitch coke is suggested.

● Quenching of HSS M35 Steel material

Quenching temperature / °C | salt bath furnace: 1190-1210

Quenching temperature / °C | controlled atmosphere furnace: 1200-1220

The heat preservation time/min: 5 ~ 15

Quenching medium: Oil cooling

Hardness: 64 HRc Min

- **Tempering Of HSS M35 Tool Steel**

Tempering temperature / °C : 540-564

After tempering hardness HRC or higher: 64

Application of Sae M35 tool Steel HSS

M35 high speed steel is the main feature containing Co general cutting tool steel, quenching hardness is 1200-1240 c. Main use cutter, broach, end milling cutter. For manufacturing strong cutting with wear-resistant, resistant to impact a variety of tools, advanced punching die, screw die, the toughness and complex shape tools, reamer, milling cutter, bunt, punch, etc

Quality Assured of Sae M35 Steel

Quality assured by ISO 9001:2008 quality management system. Our all M35 tool steel all had by SEP 1921-84 ultrasonic inspection (UT Test). Quality Grade: E/e, D/d, C/c.

If you have any M42 Tool steel inquiry and question for Price, Application, hot treatment, Please don't hesitate contact us.

Email: Jack@otaisteel.com

Tel: +86-769- 33232622

Fax: +86-769-88705839