

H13 Steel is a hot work tool steel. H13 is equivalent with JIS SKD61, GB 4Cr5MoSiV1 and DIN [1.2344](#) Tool Steel. H13 Tool Steel consists of chromium, molybdenum and vanadium and is known for its high hardenability and great toughness.

The molybdenum and vanadium act as strengthening agents while the chromium content helps the H-13 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 H13 tool steel has good machinability, good weldability and good ductility and it can be formed by conventional means. So H13 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 (%) | 0.80~ 1.20 | | |

Form of Supply

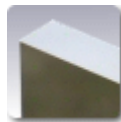
H13 tool steel, we can supply the round bar, flat bar, plate and square block. round bar can be sawn to your required lengths as one offs or multiple cut pieces. Steel plate and sheet rectangular pieces can be sawn from flat bar, sheet or plate to your specific sizes. Ground tool steel bar can be supplied, providing a quality precision finished bar to tight tolerances.



Round



sheet



Plate



Square

Applications

H-13 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

| 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.

Processing

H13 Tool Steel round bar and flat sections can be cut to your required sizes. H13 steel ground bar can also be supplied, providing a high quality tool steel precision ground tool steel bar to your required tolerances. H13 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 H13 tool steel questions and inquiry by [Email](#) or Telephone. The questions and inquiry will be reply in 24 hours.

