Tool steel H13 | 1.2344 | X40CrMoV5-1 - Annealed state

Tool Steel H13 is hot-work tool steel for dies and molds.

Mechanical properties

Ultimate tensile strength	690 MPa
Yield strength	330 MPa
Young's modulus (modulus of elasticity)	190 GPa
Elongation at break	21 %

Physical properties

Magnetism	Magnetic
Weldability	Poor

Thermal properties

Thermal expansion coefficent	10.4 - 12.4 10^-6/ºC
Thermal conductivity	22 - 29 W/(m·°C)

Electrical properties

Electrical resistivity	52 - 86 µΩ*cm

Post treatments

Post-Processing	Cold & hot working, annealing and hardening
Anodizing compatibility	Not suitable

Common applications

Hot shear blades	
Extrusion & pressure dies	

Forging & stamping dies	

Tool Steel H13 CNC Machining Applications & Parts

Tool Steel H13 is a chromium-molybdenum-vanadium hot work steel renowned for its excellent combination of high toughness, good thermal fatigue resistance, and resistance to softening at elevated temperatures. Our precision CNC machining services expertly handle this versatile tool steel for demanding applications.

Typical Parts We Machine from Tool Steel H13:

- **Die Casting & Molding:** Die casting dies, extrusion dies, hot forging dies, mold cores
- **Hot Work Tooling:** Hot punches, mandrels, hot shear blades, aluminum extrusion tools
- **Plastic Injection:** Injection molds, mold inserts, gate components, runner systems

Our Machining Advantage:

We utilize specialized tooling and machining strategies to effectively process H13 in both annealed and pre-hardened conditions, ensuring precise dimensions and excellent surface finish for critical tooling applications.

Get an Instant Quote for your custom Tool Steel H13 parts today.