Tool steel S7 | 1.2355 | 50CrMoV13-15 - Annealed state

Tool Steel S7 is shock-resistant tool steel for chisels and punches.

Mechanical properties

Ultimate tensile strength	640 - 670 MPa
Yield strength	370 - 380 MPa
Young's modulus (modulus of elasticity)	190 GPa
Elongation at break	21 - 25 %

Physical properties

Magnetism	Magnetic
Weldability	Poor

Thermal properties

Maximum service temperature	165 - 215 °C
Thermal expansion coefficent	10.7 - 11.2 10^-6/ºC
Thermal conductivity	42.3 - 45.7 W/(m·°C)

Electrical properties

Electrical resistivity	24.5 - 30.2 µΩ*cm

Post treatments

Post-Processing	Hardening & Annealing
Anodizing compatibility	Not suitable

Common applications

Cutting tools	

Shearing tools	
Cold-forming dies	
Hot forging & extrusion tools	

Tool Steel S7 CNC Machining Applications & Parts

Tool Steel S7 is a shock-resistant tool steel known for its exceptional impact toughness, good wear resistance, and moderate hardening characteristics. This air-hardening steel maintains excellent dimensional stability during heat treatment, making it ideal for applications requiring both strength and durability.

Typical Parts We Machine from Tool Steel S7:

- **Shock Tools:** Chisels, punches, hammer heads, impact tools
- **Shearing Blades:** Shear blades, slitter knives, cutting tools
- **Forming Dies:** Cold forming dies, bending dies, punching tools

Our Machining Advantage:

Our expertise in machining S7 tool steel ensures proper handling of its shock-resistant properties, delivering components with excellent edge retention and impact resistance for demanding tooling applications.

Get an Instant Quote for your custom Tool Steel S7 parts today.