Stainless steel 420 | 1.4028 | X30Cr13

Stainless Steel 420 offers high hardness and wear resistance for cutlery and molds.

Mechanical properties

Ultimate tensile strength	485-750 MPa
Yield strength	275-380 MPa
Young's modulus (modulus of elasticity)	190 - 205 GPa
Elongation at break	15 - 20 %

Physical properties

Corrosion resistance	Moderate
Magnetism	Magnetic
UV resistance	Excellent
Weldability	Good

Thermal properties

Maximum service temperature	144 - 194 °C
Thermal expansion coefficent	9 - 11 10^-6/ºC
Thermal conductivity	23 - 27 W/(m·°C)

Electrical properties

Electrical resistivity	49 - 60 µΩ*cm

Post treatments

Post-Processing	Annealing
Anodizing compatibility	Not suitable

Common applications

Shear blades	
Needle valves	
Surgical equipment	

Stainless Steel 420 CNC Machining Applications & Parts

Stainless Steel 420 is a martensitic grade known for its ability to be heat treated to high hardness levels, offering good wear resistance and moderate corrosion resistance. We machine it in both annealed and pre-hardened states.

Typical Parts We Machine from Stainless Steel 420:

- **Cutlery & Blades:** Surgical scalpels, kitchen knives, industrial blades
- **Molds & Tooling:** Plastic injection molds, mold inserts, gauges
- **Mechanical Components:** Shafts, pins, valves, bearings for non-critical environments

Our Machining Advantage:

We expertly select cutting tools and parameters based on the material's hardness, whether machining the softer annealed state or the challenging hardened condition, ensuring dimensional accuracy.

Get an Instant Quote for your custom Stainless Steel 420 parts today.