

Stainless Steel 17-4 PH

Stainless steel is well suited for a wide range of applications due to its excellent machinability and outstanding uniformity. It has good workability and weldability. This metal has very high tensile strength, and has high resistance to corrosion and wear.

Applications

Stainless steel is used in numerous industries such as aerospace, medical, nuclear, food processing, motor and pump shafts, and oil and gas. Some applications include medical instruments, chemical processing equipment, machine parts, ball bearings, gate valves, gears, pump shafts, and vacuum and pressure vessels.

Key Product Benefits

- Corrosion Resistance
- High Strength
- Ductility
- Machinability and Weldability
- Low Cost

Properties

Property	Value (Imperial)	Value (Metric)
Modulus of Elasticity	28.5 × 10 ⁶ psi	196 GPa
Modulus of Rigidity	11.2 × 10 ⁶ psi	77.2 GPa
Yield Strength	110,000 psi	760 MPa
Ultimate Tensile Strength	150,000 psi	1,030 MPa
Elongation	8%	8%
Rockwell C Hardness	33	33
Density	0.280 lb/in ³	7.75 g/cm ³
Linear Coefficient of Thermal Expansion (70°F-800°F/21°C-427°C)	6.3 × 10 ⁻⁶ /°F	11.3 10 ⁻⁶ /°C
Thermal Conductivity (70°F-212°F/21°C-100°C)	10.6 BTU-ft/hr-ft ² -°F	18.3 W/m-K
Thermal Conductivity (70°F-932°F/21°C-500°C)	13.1 BTU-ft/hr-ft ² -°F	22.7 W/m-K
Electrical Resistivity	98 microohm-cm	98 microohm-cm