

### Key Features

- Good heat resistance
- High machinability
- POOR weldability

### Common Applications

- Bushings
- Shafts
- Nut and bolts
- Gears
- Electrical switchgear components
- Aircraft fittings

### Material Description

Stainless Steel 303 is a free-machining austenitic stainless steel alloy, designed for ease of machining. It offers moderate corrosion resistance but may not be as corrosion-resistant as other austenitic grades. Commonly used in machining-intensive applications like screw machining and fittings, its sulfur content enhances machinability but may affect weldability and corrosion resistance compared to other stainless steel grades.

### Chemical Composition (%)

	C	Cr	Fe	Mn	Mo	Ni	P	Si	S		
Min.									0.15		
Max.	0.15	18	69	2.0	0.60	9.0	0.20	1.0			

### Mechanical Properties

Ultimate Tensile Strength	89,900 PSI
Tensile Yield Strength	34,800 PSI
Hardness	Rockwell B95
Elongation at Break	50%

### Physical Properties

Density	0.289 lb/in <sup>3</sup> (8.00 g/cm <sup>3</sup> )
Thermal Conductivity	16.2W/m.K
Modulus of elasticity	28,000 KSI (193 GPa)
Melting Point	2,250–2,590°F (1,400–1,420 °C)

### Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

### InstaVoxel™ – On-Demand Manufacturing Expert

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