# **STAINLESS STEEL**

# 1.4003 - 3CR12



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1.4003 (also known as 3CR12) is a utility ferritic Stainless Steel that offers all the benefits of traditional Stainless Steel such as strength, corrosion and abrasion resistance, durability, and low maintenance, but it also provides additional benefits such as good weldability and formability making it capable of fabrication by conventional techniques.

#### **KEY FEATURES**

- Good strength properties
- Good resistance to corrosion
- Good wear and abrasion resistance
- Durable and can withstand harsh conditions
- Formability and fabrication

#### **CHEMICAL PROPERTIES**

Chromium (Cr)	Manganese (Mn)	Silicone (Si)	Nickel (Ni)	Phosphorus (P)	Nitrogen (N)	Carbon	Sulphur	Iron (Fe)
10.5-12.5%	1-1.5%	1%	0.5-1%	0.04%	0.03%	0.03%	0.02%	rest

## **MECHANICAL PROPERTIES**

Tensile strength (N/mm <sup>2</sup> )	450-630
Yield strength (N/mm <sup>2</sup> )	260
Elongation (% in 4D)	25-30
Hardness - Rockwell (HRB) max	70-87
Hardness - Brinell (HB) max	170-210

### **PHYSICAL PROPERTIES**

D and $b$ (let $(2, 2)$ )		7740	
Density (kg/m <sup>3</sup> )	7740		
Modulus of elasticity (Gp	dulus of elasticity (Gpa)		
Maan as officient of	0-100°C (µm/m/°C)	11.1	
Mean coefficient of	0-350°C (µm/m/°C)	11.7	
thermal expansion	0-538°C (µm/m/°C)	12.3	
Thermal	at 100°C (W/m.K)	30.5	
conductivity	at 500°C (W/m.K)	40.0	
Specific Heat 0-100°C (J	478		
Electrical resistivity (nΩ.	678		
Melting point (°C)	1430-1510		

### **MARKET SECTORS**

Materials

Handling

Industry

Bulk wet systems, conveyors,

chutes, screens, troughs



Full fibre network

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broadband cabinets



Truck frames, bus chassis, gritter vehicles

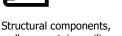


cable trays

Nuclear waste boxes,

Containers

Architectural Applications



Preparation surfaces, kitchen equipment, storage tanks

Food & Beverage

walkways, stairs, railings



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