RIGHTON BLACKBURNS
METALS AND PLASTICS

EXPERTISE COLLABORATION INTEGRITY

Stainless Steel | 1.4003 (3CR12)

Datasheet Updated
05 August 2021

RANGE

Sheet Size (ID Finish)	Thicknesses
2000 x 1000	2.0mm - 4.0mm
2500 x 1250	2.0mm - 4.0mm
3000 x 1500	2.0mm - 4.0mm

SPECIFICATIONS

Commercial	3CR12
EN	1.4003

A utility ferritic stainless steel, often used in place of mild steel.

CHEMICAL COMPOSITION

EN 10088-2
1.4003 Steel

Element	% Present
Carbon (C)	0.00 - 0.03
Chromium (Cr)	10.50 - 12.50
Manganese (Mn)	0.00 - 1.50
Silicon (Si)	0.00 - 1.00
Phosphorous (P)	0.00 - 0.04
Sulphur (S)	0.00 - 0.02
Nickel (Ni)	0.30 - 1.00
Nitrogen (N)	0.00 - 0.03
Iron (Fe)	Balance

ALLOY DESIGNATIONS

Stainless steel grade 1.4003 also corresponds to **but may not be a direct equvalent to:**

- 3CR12
- Nirosta 4003

SUPPLIED FORMS

- Bar
- Sheet
- Plate

APPLICATIONS

- Bulk wet materials handling
- Vehicle frames/chassis
- Rail car hoppers
- Sweeper and gritter vehicles
- Conveyors, chutes, screen, troughs
- Bunkers & hoppers
- Tanks & containers
- Chimneys & ducting
- Enclosures & cabinets
- Walkways, stairs & railings
- Cable trays

CHARACTERISTICS

- 250 times greater corrosion resistance than mild steel
- Corrosion/abrasion resistance
- Economical - Low initial cost, low maintenance
- High strength
- Excellent impact resistance
- Can be welded by conventional methods
- Can eliminate need for protective coating
- Can eliminate need for corrosion allowance
- Proven success in many applications across a wide range of industries
- Good performance at elevated temperatures
- Lower cost than austenitic stainless

EMAIL: sales@rblimited.co.uk WEB: www.rightonblackburns.co.uk

MECHANICAL PROPERTIES

EN 10088-2
Bar Up to 100mm Dia or Thickness

Property	Value
Proof Stress	260 Min Mpa
Tensile Strength	450-600 MPa
Hardness Brinell	200 Max HB
Elongation A	20 Min %

EN 10088-2
Sheet & Plate Up to 13.5mm Thick

Property	Value
Proof Stress	280 Min MPa
Tensile Strength	450-650 MPa
Elongation A	20 Min %

EN 10088-2
Plate Over 13.5mm to 25mm Thick

Property	Value
Proof Stress	250 Min MPa
Tensile Strength	450 - 650 MPa
Elongation A	18 Min %