

Stainless Steel

1.4305 (303) Bar

Datasheet Updated
05 August 2021

RANGE

Product Form	Imperial Sizes	Metric Sizes
Round Bar Bright Drawn H9	1/8" - 1"	2.0mm - 25.0mm
Round Bar Smooth Turned H9/10	1" - 3"	25.0mm - 60.0mm
Round Bar Peeled K12/K16	3 1/4" - 8"	
Hexagon Bar	0.250" - 2.750"	7.0mm - 50.0mm

SPECIFICATIONS

Commercial	303
EN	1.4305

A chromium-nickel austenitic stainless steel free machining bar.

CHEMICAL COMPOSITION

EN 10088-3
1.4305 Steel

Element	% Present
Carbon (C)	0.00 - 0.10
Chromium (Cr)	17.00 - 19.00
Manganese (Mn)	0.00 - 2.00
Silicon (Si)	0.00 - 1.00
Phosphorous (P)	0.00 - 0.05
Sulphur (S)	0.15 - 0.35
Nickel (Ni)	8.00 - 10.00
Copper (Cu)	0.00 - 1.00
Nitrogen (N)	0.00 - 0.11
Iron (Fe)	Balance

ALLOY DESIGNATIONS

Stainless steel grade 1.4305/334 also corresponds to the following designations **but may not be a direct equivalent**:

- UNS S30300
- BS 303S31
- EN 58M

SUPPLIED FORMS

- Bar

APPLICATIONS

- Nuts and bolts
- Screws
- Gears
- Aircraft fittings
- Bushings
- Shafts

CHARACTERISTICS

- Superior machinability due to the presence of sulphur but with reduced formability
- Excellent toughness
- Lower corrosion resistance than 1.4301
- Poor weldability

MECHANICAL PROPERTIES

EN 10088-3

Bar Up to 160mm Dia / Thickness

Property	Value
Proof Stress	190 Min MPa
Tensile Strength	500 to 750 MPa
Elongation A50 mm	35 Min %
Hardness Brinell	230 Max HB

DISCLAIMER

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