

Stainless Steel (inc. High Performance) - 1.4404 / 316L

Round Bar

Properties

Stock		Chemical Properties	
Dia (in)	Weight/m (Kg)	Element	Chemical Composition %
3mm	0.06	Carbon (C)	0.0 - 0.03
1/8	0.06	Chromium (Cr)	16.50 - 18.50
4mm	0.10	Molybdenum (Mo)	2.0 - 2.5
3/16	0.14	Silicon (Si)	0.0 - 1.0
5mm	0.15	Phosphorus (P)	0.0 - 0.05
6mm	0.22	Sulphur (S)	0.0 - 0.01
1/4	0.25	Nickel (Ni)	10.0 - 13.0
7mm	0.30	Manganese (Mn)	0.0 - 2.0
9/32	0.31	Iron (Fe)	Balance
5/16	0.39	Above properties are for 1.4404	
8mm	0.40	1.4404/316L also corresponds to the following designation 316S11	
9mm	0.50		
3/8	0.56		
10mm	0.62		
7/16	0.76		
12mm	0.89		
1/2	0.99		
13mm	1.04		
9/16	1.26		
14mm	1.27		
5/8	1.55		
16mm	1.58		
11/16	1.88		
18mm	2.00		
3/4	2.24		
20mm	2.47		
22mm	2.98		
7/8	3.04		
24mm	3.55		
25mm*	3.85		
1*	3.98		
27mm	4.50		
1 1/8*	5.03		
30mm*	5.55		
1 1/4*	6.21		
32mm	6.31		
1 3/8*	7.47		
35mm	7.55		
1 1/2*	8.94		
40mm*	9.86		
1 5/8*	10.50		
1 3/4*	12.18		

Mechanical Properties	
Property	Value
Properties below are for 1.4404 (316L) which also corresponds to 316S11	
Proof Stress	220 min MPa
Tensile Strength	520 - 680 MPa
Elongation A50 mm	40% min

Physical Properties	
Property	Value
Density	8.00 g/cm ³
Melting Point	1400°C
Thermal Expansion	15.9 x 10 ⁻⁶ /K
Modulus of Elasticity	193 GPa
Thermal Conductivity	16.3 W/m.K
Electrical Resistivity	0.074 x 10 ⁻⁶ Ω.m

1.4404/316L also corresponds to the following designation 316S11	
--	--

45mm	12.48
1 7/8	13.98
50mm	15.41
2*	15.90
2 1/8*	17.96
2 1/4*	20.13
60mm*	22.21
2 3/8*	22.40
2 1/2*	24.85
65mm	26.05
2 5/8*	27.39
70mm	30.22
2 3/4*	30.07
75mm	34.68
3*	35.76
80mm	39.47
3 1/4	42.00
3 1/2	48.69
3 3/4	55.91
4	63.62
4 1/4	71.80
4 1/2	80.50
4 3/4	89.70
5	99.40
5 1/4	110.00
5 1/2	120.00
5 3/4	131.00
6	143.00
6 1/2	168.00
6 3/4	181.00
7	195.00
185mm	217.00
7 1/2	224.00
8	255.00
8 1/2	287.00
220mm	312.00
9	322.00
9 1/2	359.00
10	397.00
10 1/2	438.00
11	481.00
12	572.00
13	672.00
340mm	734.00
14	779.00
15	894.00
16	1018.00

3mm - 25mm: Bright Drawn
H9

27mm - 3": Smooth Turned

80mm - 16": Peeled K12/K16

Disclaimer

This data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

The information provided in this datasheet has been drawn from various recognised sources, including EN Standards, recognised industry references (printed & online) and manufacturers' data. No guarantee is given that the information is from the latest issue of those sources or about the accuracy of those sources.

Material supplied by the Company may vary significantly from this data, but will conform to all relevant and applicable standards.

As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose, whether expressed or implied.

Advice given by the Company to any third party is given for that party's assistance only and without liability on the part of the Company. All transactions are subject to the Company's current Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request.