

Stainless Steel (inc. High Performance) - 1.4057 / 431

Round Bar

Properties

Stock		Chemical Properties	
Dia (in)	Weight/m (Kg)	Element	Chemical Composition %
4mm	0.10	Carbon (C)	0.12 - 0.22
5mm	0.15	Chromium (Cr)	15.50 - 17.0
1/4	0.25	Manganese (Mn)	1.50 max
5/16	0.39	Silicon (Si)	1.00 max
8mm	0.40	Phosphorus (P)	0.040 max
3/8	0.56	Sulphur (S)	0.015 max
10mm	0.62	Molybdenum (Mo)	1.50 - 2.00
7/16	0.76	Nickel (Ni)	2.0 - 2.50
12mm	0.89	Iron (Fe)	Balance
1/2	0.99		
9/16	1.26		
5/8	1.55		
16mm	1.58		
3/4	2.24		
20mm	2.47		
22mm	2.98		
7/8	3.04		
1	3.98		
1 1/8	5.03		
30mm	5.55		
1 1/4	6.21		
1 3/8	7.47		
1 1/2	8.94		
1 5/8	10.50		
1 3/4	12.18		
1 7/8	13.98		
2	15.90		
2 1/4	20.13		
2 3/8	22.40		
2 1/2	24.85		
2 5/8	27.39		
2 3/4	30.07		
3	35.76		
3 1/4	42.00		
3 1/2	48.69		
3 3/4	55.91		
4 1/2	80.50		
5	99.40		
5 1/2	120.00		
6	143.00		

Mechanical Properties	
Property	Value
Proof stress	600 min N/mm2
Tensile strength	800 - 950 N/mm2
Elongation	14% min
Hardness Brinell	290 HB

Physical Properties	
Property	Value
Density	7.70 g/cm ³
Thermal expansion	10.5 x 10 ⁻⁶ /K
Modulus of elasticity	215 GPa
Thermal conductivity	25.0 W/m.k
Electrical resistivity	0.07 x 10 ⁻⁶ Ω.m

4mm - 1": Bright Drawn H9

1 1/8" - 3": Smooth Turned

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