Stainless Steel (inc. High Performance) - 1.4542 / 17.4 PH

Round Bar

Stock

Dia (in)	Weight/m (Kg)
1/2	0.98
5/8	1.54
3/4	2.21
7/8	3.01
1	3.93
1 1/4	6.21
1 1/2	8.94
1 3/4	12.18
2	15.90
2 1/4	20.13
2 1/2	24.85
2 3/4	29.71
3	35.34
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	79.52
4 3/4	87.65
5	98.17
5 1/4	108.24
5 1/2	118.79
5 3/4	129.84
6	141.37
6 1/4	153.42
6 1/2	165.92
6 3/4	178.92
7	192.42
7 1/2	220.89
8	251.33
8 1/2	283.72
9	318.09
9 1/2	354.41
10	395.80
10 1/2	432.95
11	477.21
12	566.23
13	666.88
14	771.42
15	889.22
16	1008.25

Properties

Chemical Properties

Element	Chemical Composition %
Carbon (C)	0.00 - 0.07
Silicon (Si)	0.00 - 1.00
Manganese (Mn)	0.00 - 1.00
Nickel (Ni)	3.00 - 5.00
Chromium (Cr)	15.00 - 17.50
Copper (Cu)	3.00 - 5.00
Sulphur (S)	0.00 - 0.030
Phosphorous (P)	0.00 - 0.040
Columbium (Cb)	0.15 - 0.45

Heat Treatment & Mechanical Properties

Condition	Heat Treatment °C	0.2% Proof Stress (Mpa min)	UTS (Mpa min)	Elongation (%)	Reduction of Area % min	Hardness Brinell (HB)	Impact Toughness J min (Room temp)
A	1040 cool to below 32	-	-	-	-	363 max	-
H900	+480 1hr	1170	1310	10	40	388 min	-
H925	+495 4hrs	1070	1170	10	44	373 min	6.8
H1025	+550 4hrs	1000	1070	12	45	331 min	20
H1075	+580 4hrs	860	1000	13	45	311 min	27
H1100	+595 4hrs	795	965	14	45	302 min	34
H1150	+620 4hrs	725	930	16	50	277 min	41
H1150M	+760 2hrs / +620 4hrs	520	795	18	55	255 min	75
H1150D	+620 4hrs	725	860	16	50	255 min - 311 max	41

Modulus of elasticity, GPa at

20 °C (68°F)	100 °C (210 °F)	200 °C (390 °F)	300 °C (570 °F)	400 °C (750 °F)
10.9 (6.1)	11.0 (6.1)	11.0 (6.1)	11.1 (6.2)	11.2 (6.2)

Physical Properties

Property	Value	Unit
Density at 20°C (68 °F)	7.80	kg/dm^3
Thermal Conductivity at 20°C (68 °F)	16.0	W/m.K
Specific Heat at 20°C (68°F)	500	J/kg.K
Elastic Resistivity at 20°C (68°F)	0.71	$Ohm.mm^{2/m}$
Modulus of elasticity at 20°C (68°F)	200 x 10^3	200 x 10^3
Magnetic Properties		magnetic

Thermal Expansion Coefficient between 20degc (68 degf) and

All sizes bright ground H9

temperature below 10^-6/degc (10^-6/degf)

100 °C (210 °F)	200 °C (390 °F)	300 °C (570 °F)	400 °C (750 °F)
10.9	-	11.1	-

Disclaimer