

Stainless Steel (inc. High Performance) - 1.4462 / F51 Duplex

Seamless Pipe

Properties

Stock			Chemical Properties	
NB (in)	SCH	Weight/m (Kg)	Element	Chemical Composition %
1/2	40S	1.29	Carbon (C)	0.0 - 0.03
1/2	80S	1.64	Chromium (Cr)	21.0 - 23.0
1/2	160S	1.98	Manganese (Mn)	2.00 max
3/4	10S	1.30	Silicon (Si)	1.00 max
3/4	40S	1.71	Phosphorus (P)	0.0- 0.03
3/4	80S	2.23	Sulphur (S)	0.0 - 0.02
3/4	160S	2.94	Nickel (Ni)	4.50 - 6.50
1	10S	2.13	Nitrogen (N)	0.08 - 0.20
1	40S	2.54	Molybdenum (Mo)	2.50 - 3.50
1	80S	3.29	Iron (Fe)	Balance
1 1/4	10S	2.74		
1 1/4	40S	3.44		
1 1/2	10S	3.16		
1 1/2	40S	4.11		
1 1/2	80S	5.50		
1 1/2	160S	7.36		
2	10S	3.99		
2	40S	5.52		
2	80S	7.60		
2	160S	11.28		
2 1/2	10S	5.34		
2 1/2	40S	8.77		
2 1/2	80S	11.58		
3	10S	6.56		
3	40S	11.47		
3	80S	15.51		
3	160S	21.67		
4	10S	8.50		
4	40S	16.32		
4	80S	22.67		
4	120S	28.75		
4	160S	34.05		
5	40S	22.10		
6	10S	14.03		
6	40S	28.70		
6	80S	43.22		
6	120S	55.04		
6	160S	66.60		
8	10S	20.27		
8	20S	33.83		
8	40S	43.20		
8	80S	65.64		

Mechanical Properties	
Property	Value
Proof Stress	450 min MPa
Tensile Strength	620MPa
Elongation	25% min
Hardness Brinell	290 HB max

Physical Properties	
Property	Value
Density	7.805 g/cm ³
Thermal Expansion	13.7 x 10 ⁻⁶ /K
Modulus of Elasticity	200 GPa
Thermal Conductivity	19.0 W/m.K
Electrical Resistivity	0.085 x 10 ⁻⁶ Ω.m

8	120S	91.83
8	160S	112.98

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