

BAND-IT® Metals Data

All values in table are reference only.

Material	201 Stainless Steel	201 1/4 Hard	202 Stainless Steel	301 Stainless Steel	302 Stainless Steel	304 Stainless Steel	316 Stainless Steel	317L 1/4 Hard Stainless Steel	321 Stainless Steel	200/300 Series Stainless Steel	Alloy 400	Alloy 625	Titanium GR1
Specification													
UNS Designation	S20100	S20100	S20200	S30100	S30200	S30400	S31600	S31703	S32100	---	N04400	N06625	R50250
ASTM	A 666	A 666	A 666	A 666	A 666	A 666	A 666	A 240	A 240	---	B 127	B 443	B 265
Principal Alloying Elements, %													
C	.015 Max	.015 Max	.015 Max	.15 Max	.15 Max	.08 Max	.08 Max	.03 Max	.08 Max	---	.3 Max	.10 Max	.08 Max
Mn	5.50 - 7.50	5.50 - 7.50	7.5-10.0	2.0 Max	2.0 Max	2.0 Max	2.0 Max	2.0 Max	2.0 Max	---	2.0 Max	.50 Max	---
P	.06 Max	.06 Max	.06 Max	.045 Max	.045 Max	.045 Max	.045 Max	.045 Max	.045 Max	---	---	.015 Max	---
S	.03 Max	.03 Max	.03 Max	.030 Max	.030 Max	.030 Max	.030 Max	.030 Max	.030 Max	---	0.024 Max	.015 Max	---
Si	.75 Max	.75 Max	.75 Max	1.00 Max	.75 Max	.75 Max	.75 Max	.75 Max	.75 Max	---	0.5 Max	50 Max	---
Cr	16.0-18.0	16.0-18.0	17.0-19.0	16.0-18.0	17.0-19.0	18.0-20.0	16.0-18.0	18.0-20.0	17.0-19.0	---	---	20.0-23.0	---
Ni	3.50-5.50	3.50-5.50	4.0-6.0	6.0-8.0	8.0-10.0	8.0-10.5	10.0-14.0	11.0-15.0	9.0-12.0	---	63.0 Min	58.0 Min	---
N	.25 Max	.25 Max	.25 Max	.10 Max	---	.10 Max	---	.10 Max	.10 Max	---	---	---	.03 Max
O	---	---	---	---	---	---	---	---	---	---	---	---	.18 Max
H	---	---	---	---	---	---	---	---	---	---	---	---	.015 Max
Mo	---	---	---	---	---	---	2.0-3.0	3.0-4.0	---	---	---	8.0-10.0	---
Cu	---	---	---	---	---	---	---	---	---	---	28.0-34.0	---	---
Fe	---	---	---	---	---	---	---	---	---	---	2.5 Max	5.0 Max	.20 Max
Ti	---	---	---	---	---	---	---	---	---	---	---	0.40 Max	Balance
Zn	---	---	---	---	---	---	---	---	---	---	---	0.40 Max	Balance
Al	---	---	---	---	---	---	---	---	---	---	---	---	---
Physical Properties													
Density, Lb/Cu. In.	0.287	0.287	0.287	0.290	0.290	0.290	0.290	0.290	0.286	0.287	0.319	0.305	0.163
Structure	Austenitic	Austenitic	Austenitic	Austenitic	Austenitic	Austenitic	Austenitic	Austenitic	---	Austenitic	---	---	Alpha
Melting Range	2550 - 2650°F	2550- 2650°F	2550- 2650°F	2550- 2590°F	2550- 2590°F	2550- 2590°F	2540 - 2630°F	2540 - 2630°F	2550 - 2635°F	2550- 2650°F	2370- 2460°F	2500 - 2550°F	2500 - 2550°F
Electrical Properties	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Slightly Magnetic	Non-Magnetic	Non-Magnetic
Mechanical Properties													
Rockwell Hardness	100 Rb Max	---	100 Rb Max	95 Rb Max	92 Rb Max	92 Rb Max	95 Rb Max	95 Rb Max	95 Rb Min	70-95R ₃₀	68 Rb Max	88-94R ₃₀	64-70R ₃₀
Ultimate Tensile Strength (PSI)	95,000	125,000	90,000	75,000	75,000	75,000	75,000	115,000	75,000	75,000	70,000	120,000	35,000
Yield Strength (PSI)	45,000	75,000	38,000	30,000	30,000	30,000	40,000	75,000	30,000	30,000	28,000	60,000	20,000
% of Elongation in 2 inches, Min	40	25	40	40	40	40	35	10	40	30	35	30	24
Corrosion Resistance													
Mild Atmospheric and Fresh Water	Good	Good	Good	Good	Very Good	Very Good	Excellent	Excellent	Excellent	Good	Good	Good	Good
Industrial Atmosphere	Good	Good	Good	Good	Very Good	Very Good	Very Good	Very Good	Very Good	Good	Good	Good	Good
Marine Atmosphere	Fair	Fair	Fair	Fair	Good	Good	Very Good	Very Good	Very Good	Fair	Excellent	Excellent	Good
Salt Water	No	No	No	No	No	No	Good	Good	Good	No	Excellent	Excellent	Good
Mild Chemical	Fair	Fair	Fair	Fair	Good	Good	Good	Very Good	Good	Fair	Good	Good	Good
Oxidizing Chemical	Fair	Fair	Fair	Fair	Good	Good	Good	Good	Good	Fair	Good	Good	Excellent
Reducing Chemical	No	No	No	No	No	No	Good	Good	Good	No	Good	Good	Fair

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	Titanium GR2	Galvanized Carbon Steel	403 Stainless Steel	Carbon Steel (Magnus)	AL2003	Aluminum 3003	Alloy 27-7	Alloy AL6XN®	Alloy C276	Alloy 2507	UNS S32760	Alloy 2205	Alloy 718	409 Stainless Steel	430 Stainless Steel
	R50400 B 265	--- A 105, A 695	S40300 A 176	---	S32003 A 240	A93003 B 209	S31277 A 240	N08367 B 688	N10276 B 462	S32750 A 240	S32760 A 240	S32205 A 240	N07718 B 637	S40900 A-240	S43000 A-240
	.08 Max	.35 Max	.15 Max	---	.03 Max	---	.5-1.5	.03 Max	.01 Max	.03 Max	.03 Max	.03 Max	.08 Max	.03 Max	0.12 Max
	---	.6-1.05	1.0 Max	---	2.0 Max	1.0-1.5	3.0 Max	---	1.0 Max	1.2 Max	1.0 Max	2.0 Max	.35 Max	1.0 Max	1.00 Max
	---	.04 Max	.04 Max	---	.03 Max	---	.03 Max	.04 Max	.04 Max	0.035 Max	0.03 Max	0.03 Max	.015 Max	0.04 Max	.04 Max
	---	.05 Max	.03 Max	---	.02 Max	---	.01 Max	.03 Max	.03 Max	0.02 Max	0.01 Max	0.02 Max	.015 Max	0.02 Max	.03 Max
	---	.10-.35	.50 Max	---	1.0 Max	.60 Max	.50 Max	1.0 Max	.08 Max	.80 Max	1.00 Max	1.00 Max	.35 Max	1.00 Max	1.00 Max
	---	---	11.5-13.0	---	19.5-22.5	---	20.5-23.0	20.0-22.0	14.5-16.5	24-26.0	24.0-26.0	22.0-23.0	17.0-21.0	10.50-11.75	16.0-18.0
	---	---	.60 Max	---	3.0-4.0	---	26.0-28.0	23.5-25.5	Balance	6.0-8.0	6.0-8.0	4.5-6.5	50.0-55.0	0.5 Max	.75 Max
	.03 Max	---	---	---	.14-.20	---	.3-.4	.18-.25	---	.24-.32	.20-.30	.14-.20	---	---	---
	0.25 Max	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	.015 Max	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	---	---	---	---	1.5-2.0	---	---	6.0-7.0	15.0-17.0	3.0-4.0	3.0-4.0	3.0-3.5	2.8-3.3	---	---
	---	---	---	---	---	.20 Max	---	.75 Max	---	---	---	---	---	---	---
	.30 Max	---	---	---	Balance	.70 Max	Balance	---	4.0-7.0	---	---	---	Balance	---	---
	Balance	---	---	---	---	---	---	---	---	---	---	---	.65-1.15	---	---
	Balance	---	---	---	---	.10 Max	---	---	---	---	---	---	---	---	---
	---	---	---	---	---	Balance	---	---	---	---	---	---	.2-8	---	---
	0.163	0.283	0.282	---	0.279	0.099	0.290	0.291	0.321	0.282	0.278	0.282	0.296	0.282	0.282
	Alpha 2500 - 2550°F	Ferritic	Martensitic	Ferritic	Duplex	---	Austenitic	Austenitic	Duplex	Duplex	Duplex	Duplex	Duplex	Ferritic	Ferritic
	Non-Magnetic	Magnetic	Ferro-magnetic	Magnetic	Ferro-magnetic	---	---	---	---	---	---	---	---	---	Magnetic
	64-70R _{max}	80-95R _{max}	96 Rb Max	---	31 Rc Max	40 Brinell	90 Rb Typ	100 Rb Max	---	32 Rc Max	290 HB max	31 Rc max	109 Rb Min	88 Rb Max	89 Rb Max
	50,000	84,000	70,000	152,500	100,000	22,000	112,000	100,000	100,000	116,000	108,000	95,000	185,000	55,000	65,000
	40,000	80,000	30,000	---	70,000	21,000	52,000	45,000	41,000	80,000	80,000	65,000	150,000	25,000	30,000
	20	5	25	---	25	8	40	30	40	15	25	25	12	20	22
	Good	Good/Fair	Good	Fair/Poor	Excellent	---	Very Good	Good	Very Good	Very Good	Very Good	Excellent	Good	Good	Good
	Good	Fair	Good	Fair	Very Good	Good	Excellent	Good	Excellent	Very Good	Very Good	Very Good	Good	Good	Good
	Good	Poor	Poor	Poor	Very Good	Good	Excellent	Excellent	Excellent	Very Good	Very Good	Very Good	Excellent	Poor	Poor
	Good	No	No	No	Good	---	Excellent	Excellent	Excellent	Very Good	Very Good	Very Good	Excellent	No	No
	Good	No	Fair	No	Good	---	Good	Good	Good	Good	Good	Good	Good	Fair	Fair
	Excellent	No	Fair	No	Good	---	Good	Good	Good	Good	Good	Good	Good	Fair	Fair
	Fair	No	Fair	No	Good	---	Good	Good	Good	Good	Good	Good	Good	Good	No