

Strapbinder® Metals Data

Material	201 Stainless Steel Annealed	201 Stainless Steel 1/4 Hard	304 Stainless Steel Annealed	316 Stainless Steel Annealed	Galvanized Carbon Steel	Painted Carbon Steel	Aluminum
Specification							
UNS Designation	S20100	S20100	S30400	S31600	-	-	A93003
ASTM	A666	A666	A666	A666	A653	-	B209
Principal Alloying Elements, %							
C	.015 Max	.015 Max	.08 Max	.08 Max	.16 Max	.29 Max	-
Mn	5.50-7.50	5.50-7.50	2.0 Max	2.0 Max	1.65 Max	.9 Max	1.0-1.5
P	.06 Max	.06 Max	.045 Max	.045 Max	.020 Max	.045 Max	-
S	.03 Max	.03 Max	.030 Max	.030 Max	.020 Max	.045 Max	-
Si	.75 Max	.75 Max	.75 Max	.75 Max	-	-	.60 Max
Cr	16.0-18.0	16.0-18.0	18.0-20.0	16.0-18.0	.15 Max	-	-
Ni	3.50-5.50	3.50-5.50	8.0-10.5	10.0-14.0	.20 Max	-	-
N	.25 Max	.25 Max	.10 Max	-	-	-	-
Mo	-	-	-	2.0-3.0	.06 Max	-	-
Cu	-	-	-	-	-	-	.20 Max
Fe	-	-	-	-	-	-	.70 Max
Ti	-	-	-	-	.025 Max	-	-
Zn	-	-	-	-	-	-	.10 Max
Al	-	-	-	-	-	-	Balance
Physical Properties							
Density lb/cu. inch	0.287	0.287	0.290	0.290	0.283	-	0.099
Structure	Austenitic	Austenitic	Austenitic	Austenitic	Martensitic	-	-
Melting Range	2550-2650° F	2550-2650° F	2550-2650° F	2540-2630° F	2720°F	-	1190°F
Electrical Properties	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Magnetic	Magnetic	-
Mechanical Properties							
Rockwell Hardness	100 Rb Max	-	92 Rb Max	95 Rb Max	-	77 Rb Max	40 Brinell
Ultimate Tensile Strength (PSI)	95,000	125,000	75,000	75,000	98,000	53,000	20,000
Yield Strength (PSI)	45,000	75,000	30,000	40,000	80,000	43,000	17,000
% Elongation in 2 inches (Min)	40	25	40	35	13	13	4
Corrosion Resistance							
Mild Atmospheric and Fresh Water	Good	Good	Very Good	Excellent	Good/Fair	Fair/Poor	-
Industrial Atmosphere	Good	Good	Very Good	Very Good	Fair	Fair	Good
Marine Atmosphere	Fair	Fair	Good	Very Good	Poor	Poor	Good
Salt Water	Do not use	Do not use	Do not use	Good	Do not use	Do not use	-
Mild Chemical	Fair	Fair	Good	Good	Do not use	Do not use	-
Oxidizing Chemical	Fair	Fair	Good	Good	Do not use	Do not use	-
Reducing Chemical	Do not use	Do not use	Do not use	Good	Do not use	Do not use	-