

USABAND BREAKING STRENGTH

TYPICAL MINIMUM BREAKING STRENGTH OF BANDS - Values Shown In Pounds

STAINLESS STEEL				CARBON STEEL		
Thickness	Width	Type	Force	Thickness	Width	Force
0.015	3/8	201	450	0.025	3/8	700
0.015	1/2	201	600	0.030	1/2	1125
0.015	5/8	201	750	0.030	5/8	1405
0.015	3/4	201	900	0.030	3/4	1690
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0.020	1/4	201	500	0.048	3/4	2700
0.020	1/4	316	400	0.048	1	3600
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0.023	3/8	201	675	0.048	1 1/4	4500
0.023	1/2	201	955			
0.023	5/8	201	1125			
0.023	3/4	201	1435			

0.030	1/2	201	1500			
0.030	1/2	316	1200			
0.030	5/8	201	1875			
0.030	5/8	316	1500			
0.030	3/4	201	2250			
0.030	3/4	316	1800			

0.044	3/4	201	3300			
0.044	1	201	4400			
0.044	1 1/4	201	5500			
0.044	1 1/2	201	6600			

316	317L	410	430	Monel 400	Inconel 625	Titanium GR1	GCS 1045-1055
C 0.08 Max. Mn 2.00 Max. Si 1.00 Max. Cr 16.0 - 18.0 Ni 10.0 - 14.0 Mo 2.0 - 3.0	C 0.08 Max. Mn 2.00 Max. Si 1.00 Max. Ni 11.0 - 15.0 Cr 18.0 - 20.0 P 0.04 Max. S 0.03 Max. Mo 3.0 - 4.0	C 0.15 Max. Cr 11.5 - 13.5 Mn 1.00 Max. Si 1.00 Max. P 0.040 Max. S 0.030 Max.	C 0.12 Max. Cr 16.0 - 18.0 Mn 1.00 Max. Si 1.00 Max. P 0.040 Max. S 0.030 Max.	C 0.30 Max. Mn 1.25 Max. Si 0.50 Max. Ni 63.0 - 70.0 Cu 31.5 Fe 1.25 Max. S 0.024 Max.	C 0.10 Max. Cr 20.0 - 23.0 Mn 0.5 Max. Mo 8.0 - 10.0 Ti 0.4 Max. Fe 2.5 Max. Al 0.4 Max. Ni Balance	C 0.10 Max. N 0.03 Max. H 0.015 Max. O 0.18 Max. Fe 0.20 Max. Ti Balance	C 0.40 - 0.60 Mn 0.60 - 0.90 P 0.040 Max. S 0.050 Max.
0.29 28.0	0.29 28.0	0.28 29.0	0.28 29.0	0.319 26.0	0.305 30.0	0.163 15.0	0.283 30.0
Austenitic	Austenitic	Martensitic	Ferritic	-	-	Alpha	Ferritic
0.12	0.12	0.11	0.11	0.099	0.095	0.124	0.12
9.4	9.4	14.4	15.1	14.0	-	10	29.3
12.4	12.4	16.8	15.2	21.0	-	11	21.9
8.9	8.9	5.5	5.8	7.7	-	4.6	6.3
9.0	9.0	6.3	6.1	8.8	-	5.3	7.3
9.7	9.7	6.4	6.3	9.1	-	5.5	7.9
10.3	10.3	6.5	6.6	9.3	-	5.7	8.2
2500 - 2550 F	2500 - 2550 F	2700 - 2790 F	2600 - 2750 F	2370 - 2460 F	2350 - 2460 F	3030 - 3060 F	-
Non-magnetic μ - 1.006 74.0	Non-magnetic μ - 1.006 74.0	Magnetic μ - 700 - 1000 57.0	Magnetic μ - 800 - 1100 60.0	- 5.1	Non-magnetic 1.006 12.9	Non-magnetic 1.00005 4.20	Magnetic 1500 - 2000 17.2
70 - 85 RB	70 - 85 RB	75 - 85 RB	75 - 90RB	60 - 80RB	88 - 94RB	64 - 70RB	80 - 95RB
80.000	75.000	65.000	65.000	70.000	120.000	35.000	75.000
90.000	85.000	85.000	75.000	75.000	130.000	46.000	80.000
35.000	30.000	35.000	40.000	32.000	60.000	25.000	55.000
50.000	45.000	60.000	55.000	40.000	75.000	31.000	65.000
35	35	20	20	35	30	40	10
45	45	30	25	40	40	50	14
0.400 - 0.500	0.400 - 0.500	0.275 - 0.350	0.300 - 0.400	-	-	-	-
22.400	22.400	12.000	8.400	-	-	-	-
16.800	16.800	5.500	4.900	-	-	-	-
11.200	11.200	2.600	2.200	-	-	-	-
6.900	6.900	1.600	1.400	-	-	-	-
48.000	48.000	15.000	15.000	-	-	-	-
28.000	28.000	9.000	8.000	-	-	-	-
18.000	18.000	8.500	5.000	-	-	-	-
Non-Hardening 1700°F 1550°F	Non-Hardening 1700°F 1550°F	Heat Treatable 1300°F 1450°F	Non-Hardening 1550°F 1650°F	- 1000°F 1100°F	Non-Hardening 2000°F -	Non-Hardening -	Annealed -
Very good tough welds	Good tough welds	Fair, preheat 400 - 500°F anneal 1250°F after welding.	Fair, non-ductile welds, some response to annealing.	Good	Good	Good	Good
Excellent Very good Very good Good Good Good Good	Excellent Very good Very good Good Very good Good Good	Good Fair Poor No Fair No No	Good Good Poor No Fair Fair No	Good Good Excellent Excellent Good Good Good	Good Good Excellent Excellent Good Good Good	Good Good Good Good	Good/Fair Fair Poor No No No No
Marine / Chemical / Food / Petroleum, Paper / Textile / Medical	Pulp / Paper / Chemical	Hardware / Fasteners / Cutlery / Machinery parts / Rifle barrels / Tools / Seal screws	Interior architecture / Automotive trim	Electronics / Marine / Chemical / Petroleum	Chemical / Nuclear / Aerospace / Marine	Corrosive / Service good for machinery weldable	Indoor mild atmosphere
316 Band / Buckle clamps	317L Band for paper mills. Special applications.	-	-	Special	Special	Special	Band / Buckle preformed clamps back-its

SPECIFICATION SHEET

METALS DATA SHEET

AISI TYPE NUMBER OR NAME	201	201L	301	302	304
PRINCIPAL	C 0.15 Max.	C 0.03 Max.	C 0.15 Max.	C 0.15 Max.	C 0.08 Max.
ALLOYING ELEMENTS %	Mn 5.50 - 7.50	Mn 5.50 - 7.50	Mn 2.00 Max.	Mn 2.00 Max.	Mn 2.00 Max.
	Si 1.00 Max.	Si 1.00 Max.	Si 1.00 Max.	Si 1.00 Max.	Si 1.00 Max.
	Cr 16.0 - 18.0	Cr 16.0 - 18.0	Cr 16.0 - 18.0	Cr 17.0 - 19.0	Cr 18.0 - 20.0
	Ni 3.50 - 5.50	Ni 3.50 - 5.50	Ni 6.00 - 8.00	Ni 8.00 - 10.00	Ni 8.00 - 10.5
	N 0.25 Max.	N 0.25 Max.			
PHYSICAL PROPERTIES					
Density Lb. / Cu. In.	0.28	0.28	0.29	0.29	0.29
Mod. of elasticity in tension x 10 ⁴ Lb. /Sq. In.	28.6	28.6	28.0	28.0	28.0
Structure	Austenitic	Austenitic	Austenitic	Austenitic	Austenitic
Specific heat, B.t.u/ °F./Lb./32 - 212 °F.	0.12	0.12	0.12	0.12	0.12
Thermal conductivity 212°F.	9.4	9.4	9.4	9.4	9.4
B.t.u/Sq. Ft./Hr. °F./Ft. 932°F.	12.4	12.4	12.4	12.4	12.4
Mean coefficient of thermal expansion 32 - 212 °F.	8.7	9.0	9.4	9.6	9.6
32 - 600 °F.	9.7	10.0	9.5	9.9	9.9
per °F. x 10 ⁻⁴ 32 - 1000 °F.	10.2	10.5	10.1	10.2	10.2
32 - 1200 °F.	-	-	-	10.4	10.4
Melting Range	2550 - 2650°F.	2550 - 2650°F.	2550 - 2590°F.	2550 - 2590°F.	2550 - 2650°F.
ELECTRICAL PROPERTIES Magnetic permeability, annealed elec. resistivity, microhm-cm. 70°F.	Non-magnetic μ = 1.02 69.0	Non-magnetic μ = 1.02 69.0	Non-magnetic μ = 1.02 72.0	Non-magnetic μ = 1.008 72.0	Non-magnetic μ = 1.008 70.0
MECHANICAL PROPERTIES					
Rockwell Hardness	90 - 95RB	20 - 30RC	75 - 95RB	70 - 90RB	70 - 90RB
Ultimate - Min. spec. (PSI)	100.000	120.000	-	-	75.000
Tensile Strength typical (PSI)	115.000	135.000	105.000	80.000	80.000
Yield strength band - Min. spec. (PSI)	45.000	85.000	-	-	30.000
Typical (PSI)	60.000	90.000	55.000	45.000	45.000
Elongation band - Min. spec. [%] in 2 inches. Typical [%]	40 55	40 45	-	-	-
Ductility, annealed - Olsen, inches	0.425 - 0.500	0.425 - 0.500	0.425 - 0.500	0.400 - 0.450	0.400 - 0.450
Creep strength At 1000°F.	-	-	-	17.000	17.000
Life of 10.000hrs. At 1100°F.	-	-	-	12.000	12.000
With 1% elongation At 1200°F.	-	-	-	7.000	7.000
Lb./Sq. In. At 1300°F.	-	-	-	4.000	4.000
Strength at elevated 1300°F.	37.500	37.500	35.500	36.000	36.000
Temps. short time 1500°F.	23.000	23.000	22.500	22.000	22.000
Test Lb./Sq. In. 1700°F.	11.000	11.000	11.000	13.500	13.500
HEAT TREATMENT	Non-Hardening	Non-Hardening	Non-Hardening	Non-Hardening	Non-Hardening
HEAT RESISTANCE Continuous service	1550°F.	1550°F.	1650°F.	1650°F.	1700°F.
Scaling temperature Intermittent service	1400°F.	1400°F.	1500°F.	1500°F.	1550°F.
WELDING PROPERTIES	Very good Tough welds	Very good Tough welds	Very good Tough welds	Very good Tough welds	Very good Tough welds
CORROSION RESISTANCE					
Mild atmospheric and fresh water	Good	Good	Good	Very good	Very good
Industrial atmosphere	Good	Good	Good	Very good	Very good
Marine atmosphere	Fair	Fair	Fair	Good	Good
Salt water	No	No	No	No	No
Mild chemical	Fair	Fair	Fair	Fair	Good
Oxidizing chemical	Fair	Fair	Fair	Fair	Good
Reducing chemical	No	No	No	No	No