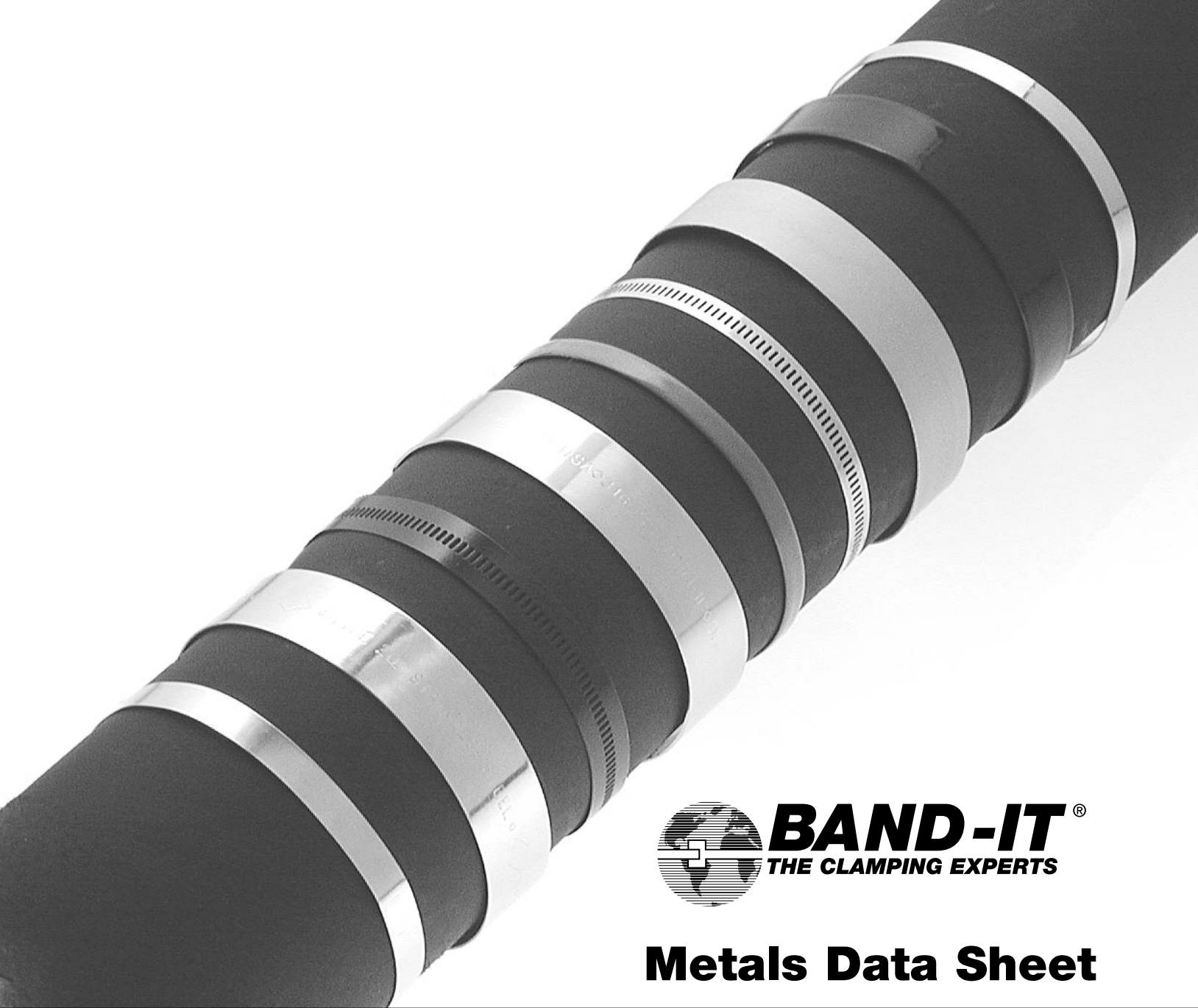




Metals Data Sheet

All materials used in BAND-IT products are in accordance with American Iron and Steel Institute compositions and meet many ASTM and other standards.

The specifications listed herein are typical values and are not guaranteed by BAND-IT - IDEX, INC. unless certification is requested with order.

BAND-IT reserves the right to change or substitute materials.

BAND-IT

METALS DATA SHEET

BELOW LISTED VALUES ARE TYPICAL AND NOT GUARANTEED BY BAND-IT - IDEX, INC.

AISI TYPE NUMBER OR NAME	200/300	201	201 1/4 Hard	301	304
PRINCIPAL ALLOYING ELEMENTS, %	C 0.15 Max. Mn 7.5 Max. Si 1.00 Max Cr 16.00-20.00 Ni 3.5-10.5 N .25 Max.	C 0.15 Max. MN 5.50- 7.50 Si 1.00 Max. Cr 16.00- 18.00 Ni 3.50- 5.50 N 0.25 Max.	C 0.03 Max. MN 5.50- 7.50 Si 1.00 Max. Cr 16.00- 18.00 Ni 3.50- 5.50 N 0.25 Max.	C 0.15 Max. MN 2.00 Max. Si 1.00 Max. Cr 16.00- 18.00 Ni 6.00- 8.00	C 0.08 Max. MN 2.00 Max. Si 1.00 Max. Cr 18.00- 20.00 Ni 8.00- 10.50
PHYSICAL PROPERTIES					
Density, Lb./Cu. In.	0.28	0.28	0.28	0.29	0.29
Mod. of Elasticity in Tension x 10 ⁶ Lb./Sq. In.	28.0	28.6	28.6	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 32-212°F.	9.0	8.7	9.0	9.4	9.6
of Thermal 32-600°F.	9.7	9.7	10.0	9.5	9.9
Expansion 32-1000°F.	10.2	10.2	10.5	10.1	10.2
Per °F. x 10 ⁻⁶ 32-1200°F.	10.4	-	-	-	10.4
Melting Range	2550-2650°F.	2550-2650°F.	2550-2650°F.	2550-2590°F.	2550-2650°F.
ELECTRICAL PROPERTIES	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic
Magnetic Permeability, Annealed	μ = 1.02	μ = 1.02	μ = 1.02	μ = 1.02	μ = 1.008
Elec. Resistivity, Microhm-cm, 70°F.	70.0	69.0	69.0	72.0	70.0
MECHANICAL PROPERTIES					
Rockwell Hardness	70-95R _B	90-95R _B	20-30R _C	75-95R _B	70-90R _B
Ultimate, Band-It Min. Spec. (PSI)	75,000	100,000	120,000	100,000	75,000
Tensile Strength, Typical (PSI)	80,000	115,000	135,000	105,000	80,000
Yield Strength, Band-It. Min. Spec. (PSI)	30,000	45,000	85,000	45,000	30,000
Typical (PSI)	45,000	60,000	90,000	55,000	45,000
Elongation, Band-It. Min. Spec. (%)	30	40	40	40	30
in 2 Inches, Typical (%)	45	55	45	50	45
Ductility, Annealed-Olsen, Inches	0.400-0-.500	0.425-0.500	0.425-0.500	0.425-0.500	0.400-0.450
Creep Strength, At 1000°F.	-	-	-	-	17,000
Life of 10,000 Hrs. At 1100°F.	-	-	-	-	12,000
with 1% Elongation, At 1200°F.	-	-	-	-	7,000
Lb./Sq. In. At 1300°F.	-	-	-	-	4,000
Strength at Elevated 1300°F.	36,000	37,500	37,500	35,500	36,000
Temps., Short Time 1500°F.	22,000	23,000	23,000	22,500	22,000
Tests, Lb./Sq. In. 1700°F.	11,000	11,000	11,000	11,000	13,500
HEAT TREATMENT	Non-Hardening	Non-Hardening	Non-Hardening	Non-Hardening	Non-Hardening
HEAT-RESISTANCE					
Scaling Temperature Continuous Service	1550°F.	1550°F.	1550°F.	1650°F.	1700°F.
Intermittent Service	1400°F.	1400°F.	1400°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	Good	Very Good
Industrial Atmosphere	Good	Good	Good	Good	Very Good
Marine Atmosphere	Fair	Fair	Fair	Fair	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
USE					
General	Municipal Strapping Construction	Construction Automotive	Construction Automotive	Construction Automotive	Chemical, Food Dairy, Hospitals, Power Generator
BAND-IT	Valustrap Valuclips Sign Band Brackets BAND-IT Tie	Junior Clamps SID Jr. Clamps Band Buckle Free-End Clamps Tie Strips Band-Lok Tie	Center Punch Clamps Preformed Clamps Ultra-Lok Clamps Ultra-Lok Free End	Scru-Seal Housing & Base Worm Gear Clamps Buckles	304 Strap Tie-Dex Band Tie-Lok Ties Ball-Lok Ties Self-Lok Ties
SPECIFICATION					
UNS Designation		S20100	S20100	S30100	S30400
AMS No.		-	-	5517, 5518	5513
Mil. Spec.		-	-	S-5059	S-5059
Fed. QQ		-	-	-	-
ASTM		A-412	A-412	A-167, A-177, A-666	A-167, A-666

316	317L 1/4 Hard	430	Monel 400	Inconel 625	Titanium GR1	GCS
C 0.08 Max. Mn 2.00 Max. Si 1.00 Max. Cr 16.00- 18.00 Ni 10.00- 14.00 Mo 2.00- 3.00	C 0.08 Max. MN 2.00 Max. Si 1.00 Max. Ni 11.00- 15.00 Cr 18.00- 20.00 P .04 Max. S .03 Max. Mo 3.00- 4.00	C 0.12 Max. Cr 16.00- 18.00 Mn 1.00 Max. Si 1.00 Max. P 0.040 Max. S 0.030 Max.	C 0.30 Max. Mn 1.25Max. Si 0.50 Max. Ni 63.0- 70.0 Cu 31.5 Fe 1.25 Max. S 0.024 Max.	C 0.1 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 .10 Max. N .03 Max. H .015 Max. O .18 Max. Fe .20 Max. Ti Balance	
0.29	0.29	0.28	.319	.305	.163	.283
28.0	28.0	29.0	26.0	30.0	15.0	30
Austenitic	Austenitic	Ferritic	-	-	Alpha	Ferritic
0.12	0.12	0.11	.099	.095	.124	.12
9.4	9.4	15.1	14.0	-	10	29.3
12.4	12.4	15.2	21.0	-	11	21.9
8.9	8.9	5.8	7.7	-	4.6	6.3
9.0	9.0	6.1	8.8	-	5.3	7.3
9.7	9.7	6.3	9.1	-	5.5	7.9
10.3	10.3	6.6	9.3	-	5.7	8.2
2500-2550°F.	2500-2550°F.	2600-2750°F.	2370-2460°F.	2350-2460°F.	3030-3050°F.	-
Non-Magnetic μ = 1.008 74.0	Non-Magnetic μ = 1.008 74.0	Magnetic μ = 600-1100 60.0	- - 5.1	Non-Magnetic 1.006 12.9	Non-Magnetic 1.00005 4.20	Magnetic 1500-2000 17.2
70-85R _B	70-85R _B	75-90R _B	60-80R _B	88-94R _B	64-70R _B	80-95R _B
80,000	115,000	65,000	70,000	120,000	-	84,000
90,000	120,000	75,000	75,000	130,000	46,000	90,000
35,000	75,000	40,000	32,000	60,000	25,000	80,000
50,000	80,000	55,000	40,000	75,000	31,000	85,000
35	10	20	30	30	24	5
45	15	25	40	40	30	8
0.400-0.500	0.400-0.500	0.300-0.400	-	-	-	-
22,400	22,400	8,400	-	-	-	-
16,800	16,800	4,900	-	-	-	-
11,200	11,200	2,200	-	-	-	-
6,900	6,900	1,400	-	-	-	-
48,000	48,000	15,000	-	-	-	-
28,000	28,000	8,000	-	-	-	-
18,000	18,000	5,000	-	-	-	-
Non-Hardening	Non-Hardening	Non-Hardening	-	Non-Hardening	Non-Hardening	-
1700°F. 1550°F.	1700°F. 1550°F.	1550°F. 1650°F.	1000°F. 1100°F.	2000°F.	-	-
Very Good Tough Welds	Good Tough Welds	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 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 *	Good/Fair Fair Poor No No No No
Marine, Chemical Food, Petroleum, Paper, Textile, Medical Multi-Lok, Tie-Lok, Ball-Lok, Self-Lok Ties Jr. Clamps Nipples, Tri-Lokts 316 Band/Buckle	Pulp/Paper Chemical 317L Band for Paper Mills Special Applications	Interior Architecture, Automotive Trim Automotive Universal Clamp	Electronics, Marine, Chemical, Petroleum Special	Chemical, Nuclear, Aerospace, Marine Special	Corrosive Service Good for Machinery Weldable Special	Indoor Mild Atmosphere Band/Buckle Preformed Clamps Brack-Its
S31600 5524 S-5059 - A-167, A-240	S31703 - - - A-167	S43000 5503 - 763C A-167, A-240	N04400 4544/47300 N894, T-842 N-281 B127, B164-61	6625 5599/5666 5837 - B443	R50250 - T9046 - B265	- - - -

BAND-IT

Product Availability Guide

PRODUCT	STAINLESS STEEL							CARBON STEEL GALVANIZED
	AUSTENITIC OR 200/300	201	1/4 HD 201	304	316	COATED 316	317L	
BAND/STRAP	BAND	X		X	X		X	X
	GIANT BAND		X					x
	VALUSTRAP	X						
	VALUBAND	X						
	VALUSTRAP PLUS	X						
	SIGNBAND	X						
	304 STRAP			X				
	COATED BAND					X		
	ALL PURPOSE BAND					X		X
PREFORMED MED CLAMPS	JR. CLAMP		X		X			X
	C-P CLAMP		X					X
	ULTRA-LOK CLAMP			X				
	FREE-END CLAMP		X					
	OPEN-END CLAMP	X						
BUCKLES/CLIPS	EAR-LOKT BUCKLE		X		X			X
	GIANT EAR-LOKT BUCKLE	X						
	FREE-END CLIP		X					
	VALUCLIP	X						
	CLIP FOR COATED BAND				X			
	SCRU-LOKT BUCKLE	X						
OTHER	NIPPLES				X			X
	TRI-LOKT NIPPLES				X			X
	BRACK-ITS	X						X
	FREE-END CLAMP		X					
	OPEN-END CLAMP	X						
TIES	BAND-IT TIE	Coated				X*		
	MULTI-LOK TIE				X	X		
	TIE-LOK TIE			X	X			
	MINI-TIE-LOK TIE			X	X			
	SELF-LOK TIE			X	X			
	BAND-LOK TIE		X					
	BALL-LOK TIE			X	X			
	TIE-DEX TIE			X				
	ULTRA LOK FREE-END		X					

* special request

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