



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 of Thermal Expansion 32-212°F.	9.0	8.7	9.0	9.4	9.6
32-600°F.	9.7	9.7	10.0	9.5	9.9
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					
Magnetic Permeability, Annealed	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic	Non-Magnetic
Elec. Resistivity, Microhm-cm, 70°F.	μ = 1.02 70.0	μ = 1.02 69.0	μ = 1.02 69.0	μ = 1.02 72.0	μ = 1.008 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

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Product Availability Guide

PRODUCT	STAINLESS STEEL							CARBON STEEL GALVANIZED
	AUSTENITIC OR 200/300	201	1/4 HD 201	304	316	COATED 316	317L	
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
BAND/STRAP								
JR. CLAMP		X			X			X
C-P CLAMP		X						X
ULTRA-LOK CLAMP			X					
FREE-END CLAMP		X						
OPEN-END CLAMP	X							
PREFORMED MED CLAMPS								
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							
BUCKLES/CLIPS								
NIPPLES					X			X
TRI-LOKT NIPPLES					X			X
BRACK-ITS	X							X
FREE-END CLAMP		X						
OPEN-END CLAMP	X							
OTHER								
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					
TIES								

* special request

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