

BAND-IT®
METALS DATA SHEET

B-39-1

AISI TYPE NUMBER OR NAME	201	201L	301	302	304
PRINCIPAL ALLOYING ELEMENTS, %	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 0.15 Max. Mn 2.00 Max. Si 1.00 Max. Cr 17.00-19.00 Ni 8.00-10.00	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	0.29	0.29	0.29
Mod. of Elasticity in Tension × 10 ⁸ 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, B.t.u./Sq. Ft./Hr.°F./Ft.	212°F. 932°F. 9.4 12.4	9.4 12.4	9.4 12.4	9.4 12.4	9.4 12.4
Mean Coefficient of Thermal Expansion Per °F. × 10 ⁻⁶	32-212°F. 32-600°F. 32-1000°F. 32-1200°F. 8.7 9.7 10.2 —	9.0 10.0 10.5 —	9.4 9.5 10.1 —	9.6 9.9 10.2 10.4	9.6 9.9 10.2 10.4
Melting Range	2550-2650°F.	2550-2650°F.	2550-2590°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.	$\mu = 1.02$ 69.0	$\mu = 1.02$ 69.0	$\mu = 1.02$ 72.0	$\mu = 1.008$ 72.0	$\mu = 1.008$ 70.0
MECHANICAL PROPERTIES					
Rockwell Hardness	90-95 R _B	20-30 R _C	75-95 R _B	70-90 R _B	70-90 R _B
Ultimate, Band-It 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-It. Min. Spec. [PSI]	45,000	85,000	—	—	30,000
Typical [PSI]	60,000	90,000	55,000	45,000	45,000
Elongation, Band-It Min. Spec. [%] in 2 Inches, Typical [%]	40 55	40 45	— 50	— 50	30 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, Life of 10,000 Hrs. with 1% Elongation, Lb./Sq. In.	At 1000°F. At 1100°F. At 1200°F. At 1300°F. — — — —	— — — —	— — — —	17,000 12,000 7,000 4,000	17,000 12,000 7,000 4,000
Strength at Elevated Temps., Short Time Tests, Lb./Sq. In.	1300°F. 1500°F. 1700°F. 37,500 23,000 11,000	37,500 23,000 11,000	35,500 22,500 11,000	36,000 22,000 13,500	36,000 22,000 13,500
HEAT TREATMENT	Non-Hardening	Non-Hardening	Non-Hardening	Non-Hardening	Non-Hardening
HEAT-RESISTANCE					
Scaling Temperature	Continuous Service Intermittent Service 1550°F. 1400°F.	1550°F. 1400°F.	1650°F. 1500°F.	1650°F. 1500°F.	1700°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
USE					
General	Construction Automotive	Construction Automotive	Construction Automotive	Chemical, Food, Dairy, Hospitals	Chemical, Food Dairy, Hospitals, Power Generator
Band-It	Band/Buckle Preformed Clamps Free-End Clamps Tie Strips	Center Punch Clamps Preformed Clamps	Scru-Seal Housing & Base Worm Gear Clamps	—	304 Strap Insulstrap Valuclips
SPECIFICATION					
UNS Designation	S20100	S20100	S30100	S30200	S30400
AMS No.	—	—	—	5516	5513
Mil. Spec.	—	—	S-5059	S-5059	S-5059
Fed. QQ	—	—	—	—	—
ASTM	A-412	A-412	A-167, A-177	A-167	A-167