

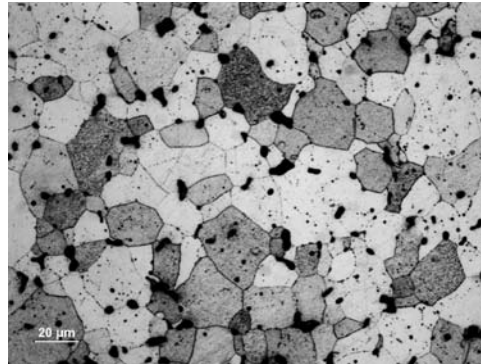


Ferritic Stainless Steel: SSI-409L

Chemistry

	Min	Max
Chromium	10.50	11.75
Columbium	0.3	0.8
Silicon	-	1.0
Manganese	-	1.0
Phosphorus	-	0.04
Sulfur	-	0.03
Carbon	-	0.03
Nitrogen	-	0.03

Microstructure



Fully ferritic with predominantly non-interconnected porosity

(Vilella's Etch)

Room Temperature Mechanical Properties

Density, g/cm ³	7.25
Ultimate Tensile Strength, 10 ³ psi (MPa)	54 (370)
Yield Strength (0.2%), 10 ³ psi (MPa)	32 (220)
Elongation (in 1.0 in.), %	20
Elastic Modulus, x10 ⁶ psi (MPa)	27 (185)
Poisson's Ratio	0.27
Charpy Unnotched Impact Energy, ft-lbs (J)	85 (115)
Macrohardness (Apparent), HRB	63

High Temperature Mechanical Properties

1200 F (650 C)

Ultimate Tensile Strength, 10 ³ psi (MPa)	34 (235)
Yield Strength (0.2%), 10 ³ psi (MPa)	20 (135)
Elongation (in 1.0 in.), %	15

1600 F (870 C)

Ultimate Tensile Strength, 10 ³ psi (MPa)	8 (55)
Yield Strength (0.2%), 10 ³ psi (MPa)	6 (40)
Elongation (in 1.0 in.), %	60

Typical Magnetic Properties

Density, g/cm ³	7.25
Resistivity, µΩ-cm	67
Magnetic Induction (B ₁₀₀), kG (Tesla)	13.8 (1.38)
Remanent Induction (B _r), kG (Tesla)	5.0 (0.50)
Coercive Force (H _c), Oe (A/m)	2.8 (223)
Maximum Permeability (µ _{max})	1100

Reference Standards: MPIF Std. 35 (SS-409L); ASTM B783 (SS-409L); Ford WSS-M10A101-A3

The data presented are typical values, obtained from test specimens processed through production equipment. The data does not represent a guarantee of minimum or maximum values for the materials in actual parts, nor are they intended as warranties, express or implied, of fitness of material for use in any specific application.