HM Wire International, Inc.

Ph: 330-244-8501 Fax: 330-244-8561

www.litz-wire.com info@litz-wire.com www.hmwire.com

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Alloy 321 Stainless Steel

Nominal Composition:	C	Mn	P	S	Si	Cr	Ni
	0.08	2.00	0.045	0.030	0.75	17 - 19	9 - 12
	Ti		N	Fe			
	5x(C+N) min to 0.70 max		0.10	Balance			

Minimum Room Temperature Mechanical Properties

Hardness, Maximum

Plate	Sheet	Strip
217 Brinell	95 Rb	95 Rb

Yield Strength .2% offset psi (MPa)	Ultimate Tensile Strength psi (MPa)	% Elongation in 2 in.
30,000 (205)	75,000 (515)	40.0

Typical Elevated Temperature Tensile Properties (0.036in / 0.9mm thick)

Test Temperature °F	Test Temperature °C	Yield Strength .2% offset psi (MPa)	Ultimate Tensile Strength psi (MPa)	% Elongation in 2 in.
68	20	31,400 (215)	85,000 (590)	55.0
400	204	23,500 (160)	66,600 (455)	38.0
800	427	19,380 (130)	66,300 (455)	32.0
1000	538	19,010 (130)	64,400 (440)	32.0
1200	649	19,000 (130)	55,800 (380)	28.0
1350	732	18,890 (130)	41,500 (285)	26.0
1500	816	17,200 (115)	26,000 (180)	45.0

*To be used as a guideline only.

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Typical Physical Properties

Density	7.92 g/cu cm.	0.286 lb/cu in.
Modulus of elasticity in tension	28 x 10^6 psi	193 GPa

Mean Coefficient of Linear Thermal Expansion

Temp. Range °F	Temp. Range °C	cm/cm °C	in/in °F
68 - 212	20 - 100	16.6 x 10	9.2 x 10
68 - 1112	20 - 600	18.9 x 10	10.5 x 10
68 - 1832	20 - 1000	20.5 x 10	11.4 x 10

Thermal Conductivity

Temp. Range °F	Temp. Range °C	W/m·K	Btu·in/hr·f^2·°F
68 - 212	20 - 100	16.3	112.5
68 - 932	20 - 500	21.4	14.7