Elgiloy Specialty Metals – Wire Products

Haynes® Alloy 214

UNS N07214
W.Nr 2.4646

Applicable Specifications

Wire & Bar	PS-6104, PWA 1130

Description: Haynes® Alloy 214 is a nickel-chromium-aluminum-iron alloy with excellent high temperature corrosion and oxidation resistance at and above 955°C (1750°F). Haynes® Alloy 214 is sold in the solution heat treated condition and is best suited for high temperature, low stress environments. At temperatures above 1750°F, an Al_2O_3 type oxide scale develops, providing excellent resistance to carburization, nitriding and corrosion in chlorine-bearing oxidizing environments. H214 exhibits good forming and welding characteristics, provided that extended time at intermediate age-hardening temperatures is avoided.

Applications include: High temperature mesh/fixtures, refractory anchors, static oxidation-limited parts, high temperature chlorine-contaminated applications

Industries supplied include: Aerospace, Automotive, Industrial Heating, Medical Waste Disposal, and Land-Based Gas Turbines.

Nominal Composition

	C	Mn	Si	S	Cr	Co	Mo	W	Ti	Al	B	Fe	Y	Ni
min					15.0					4.00		2.00	.002	75 Bal
max	0.15	1.00	0.50	0.015	17.0	2.00	1.00	1.00	0.50	5.00	0.015	6.00	.040	

Physical Properties

	At 70°F	At 20°C
Density	0.291 lb/in^3	08.05 g/cm^3
Modulus of Elasticity (E)	31.6 x 10^3 ksi	218 GPa
Coefficient of Expansion	11.1 µin/in-°F (70-2000°F)	20.2 µm/m-°C (25-1100°C)
Electrical Resistivity	53.5 µohm-in	135.9 µohm-cm
Thermal Conductivity	83 Btu-in/ft^2-hr-°F	12.0 W/m-°C

Typical Mechanical Properties

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1950-2050°F (1066-1121°C)	130-150 ksi (895-1035 MPa)	-330°F to 2400°F (-200°C to 1315°C)

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REV 2024 04 02

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