

Haynes® 263 alloy

UNS N07263

Applicable Specifications

Wire & Bar AMS 5872 (chemistry only)

Description: Haynes® 263 alloy is an age-hardenable Ni-Co-Cr-Mo alloy designed to combine very good aged strength with excellent fabrication characteristics in the annealed condition. While its strength at high temperature is not quite as high as Waspaloy or R-41, it is far easier to form or weld than these alloys. Haynes® 263 exhibits excellent intermediate temperature tensile ductility and is not normally subject to strain age cracking problems common for gamma prime strengthened alloys. In many applications, Haynes® 282® has replaced Haynes® 263 due to its superior mechanical properties and further improved fabricability.

Applications include: Low temperature combustors, Transition liners, Rings

Industries supplied include: Aerospace, Land Based Turbines

Nominal Composition

	C	Mn	Si	P	S	Cr	Ni	Co	Mo	Ti	Al	Ti+Al	B	Cu	Fe
min	0.04	-	-	-	-	19.00	Bal	19.00	5.60	1.90	0.30	2.40	-	-	-
max	0.08	0.60	0.40	0.015	0.007	21.00		21.00	6.10	2.40	0.60	2.80	0.005	0.20	0.70

Physical Properties

	At 70°F	At 20°C
Density	0.302 lb/in ³	8.36 g/cm ³
Modulus of Elasticity (E)	32.1 x 10 ³ ksi	221 GPa
Coefficient of Expansion	9.9 µin/in-°F (70-1800°F)	18.1 µm/m-°C (25-1000°C)
Electrical Resistivity	45.3 µohm-in	115 µohm-cm
Thermal Conductivity	81 Btu-in/ft ² -hr-°F	11.7 W/m-°C

Typical Mechanical Properties

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1900-1050°F (1038-1177°C)	110-140 ksi (758-965 MPa)	Up to 1650°F (900°C)
Aged	1475°F (802°C) for 8 hours	160 ksi min (1103 MPa)	Up to 1300°F (704°C)

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