

Hastelloy® C-2000 alloy

UNS N06200
W. Nr 2.4675

HASTELLOY® C-2000 alloy broadens the range of the nickel-chromium-molybdenum alloy family with the addition of Copper which allows for resistance to an extensive range of corrosive chemicals including sulfuric, hydrochloric, and hydrofluoric acids over large temperature ranges. Molybdenum and Copper provide excellent corrosion resistance to reducing media while the Chromium content gives good oxidizing resistance.

Applications include: Chemical processing.

Nominal Composition

	C	Mn	Si	P	S	Cr	Co	Mo	V	Fe	Al	Cu	Ni
min	-	-	-	-	-	22.00	-	15.00	-	-	-	1.30	
max	0.010	0.50	0.08	0.025	0.010	24.00	2.00	17.00	0.50	3.00	0.50	1.90	BAL

Physical Properties

	At 70°F	At 20°C
Density	0.307 lb/in ³	8.50 g/cm ³
Modulus of Elasticity (E)	30.0 x 10 ³ ksi	207 GPa
Modulus of Rigidity (G)	11.5 x 10 ³ ksi	79 GPa
Coefficient of Expansion	7.4 microinches/in.-°F (70-1000°F)	13.2 μm/m-°C (20-538°C)
Electrical Resistivity	50.6 μ ohm.in	1.28 μ ohm.cm
Thermal Conductivity	63 Btu-in./ft. ² hr.-°F	9.1 W/m-K

Applicable Specifications

Strip	ASTM B575
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Typical Mechanical Properties – Spring Applications

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1950°F (1065°C)	100 ksi (690 MPa) min 125 ksi (860 MPa) typ	-300°F to 1200°F (-184°C to 600°C)

Hastelloy® is a registered trademark of Haynes International, Inc.

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