

## Hastelloy® C-4 alloy

UNS N06455  
W. Nr 2.4610

HASTELLOY® C-4 alloy is a nickel-chromium-molybdenum alloy with excellent resistance to stress-corrosion cracking and to oxidizing atmospheres at high temperature. It has virtually the same corrosion resistance as C-276. It exhibits exceptional resistance to a wide variety of chemical process environments.

Applications include: Chemical processing, nuclear fuel processing, marine applications.

### Nominal Composition

	C	Mn	Si	P	S	Cr	Co	Mo	Ti	Fe	Al	W	Ni
min	-	-	-	-	-	14.00	-	14.00	-	-	-	-	
max	0.015	1.00	0.08	0.040	0.030	18.00	2.00	17.00	0.70	3.00	-	-	BAL

### Physical Properties

	At 70°F	At 20°C
Density	0.312 lb/in <sup>3</sup>	8.64 g/cm <sup>3</sup>
Modulus of Elasticity (E)	30.8 x 10 <sup>3</sup> ksi	211 GPa
Modulus of Rigidity (G)	11.4 x 10 <sup>3</sup> ksi	78.6 GPa
Coefficient of Expansion	7.4 microinches/in.-°F (70-1000°F)	13.3 µm/m-°C (20-538°C)
Electrical Resistivity	49.1 µ ohm.in	1.25 µ ohm.cm
Thermal Conductivity	70 Btu-in./ft. <sup>2</sup> hr.-°F	10.1 W/m-K

### Applicable Specifications

Strip	ASTM B575, NACE MR0175
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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 750°F (-184°C to 400°C)

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

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Elgiloy Specialty Metals - Strip  
Products

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