

Hastelloy® alloy C-276

UNS N10276
W.Nr 2.4819

Hastelloy® alloy C-276 is a Nickel-Molybdenum-Chromium corrosion resistant alloy. The alloy is resistant to pitting, crevice corrosion, and stress corrosion cracking. Hastelloy® C-276 is hardened only by cold-working. Hastelloy® C-276 can operate from cryogenic temperatures up to 750°F (400°C).

Applications include springs, heat exchangers, and seals.

Industries supplied include: Chemical Processing, Pollution Control, Pulp and Paper Production, and Waste Treatment.

Nominal Composition

	Mo	Cr	Fe	W	Co	Mn	Ni	V	Si	P	S	C
min	15	14.5	4	3								
max	17	16.5	7	4.5	2.5	1	balance	0.35	0.08	0.04	0.03	0.01

Physical Properties

	At 70°F	At 20°C
Density	0.321 lb/in ³	8.89 g/cm ³
Modulus of Elasticity (E)	29.8 x 10 ³ ksi	205 GPa
Modulus of Rigidity (G)	11.4 x 10 ³ ksi	79 GPa
Coefficient of Expansion	7.1 microinches/in.-°F (70-600°F)	12.8 x μm/m-°C (20-300°C)
Electrical Resistivity	51 μ ohm.in	130 μ ohm.cm
Thermal Conductivity	67.9 Btu-in./ft. ² hr.-°F	9.8 W/m-K

Applicable Specifications

Wire & Bar | ASTM B574, AWS A5.14, NACE MRO175 (ISO 15156-3).

Typical Mechanical Properties – Spring Applications

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	2048°F (1120°C)	120 – 160 Ksi (830 – 1100 MPa)	-300°F to 750°F (-184°C to 400°C)
Spring Temper		200 – 240 ksi (1380 – 1655 MPa)	-300°F to 750°F (-184°C to 400°C)

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