

Hastelloy® alloy C-2000

UNS N06200
W.Nr 2.4675

Hastelloy® alloy C-2000 is a versatile Nickel-Chromium-Molybdenum alloy with excellent corrosion resistance to all acids over a large temperature range. It is highly resistant to a wide range of oxidizing and non-oxidizing chemicals and exhibits outstanding resistance to pitting and crevice attack in the presence of chlorides and other halides.

Applications include springs, fasteners, pump and mixer shafts.

Industries supplied include: Chemical Processing.

Nominal Composition

	Cr	Mo	Fe	Co	Cu	Ni	C	Mn	Al	Si	P
min	22	15			1.3						
max	24	17	3	2	1.9	balance	0.01	0.5	0.5	0.08	0.025

Physical Properties

	At 70°F	At 20°C
Density	.307 lb/in ³	8.5 g/cm ³
Modulus of Elasticity (E)	30 x 10 ³ ksi	207 GPa
Modulus of Rigidity (G)	11.5 x 10 ³ ksi	79 GPa
Coefficient of Expansion	7 microinches/in.-°F (70-600°F)	12.6 µm/m-°C (20-300°C)
Electrical Resistivity	50.6 µ ohm.in	128 µ ohm.cm
Thermal Conductivity	63 Btu-in./ft. ² hr.-°F	9.1 W/m-K

Applicable Specifications

Wire & Bar ASTM B574, NACE MR0175 (ISO 15156-3).

Typical Mechanical Properties – Spring Applications

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	2075°F (1135°C)	100 – 140 ksi (690 – 965 MPa)	-330°F to 750°F (-200°C to 400°C)
Spring Temper		200 – 250 ksi (1380 – 1720 MPa)	-330°F to 750°F (-200°C to 400°C)

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