

Hastelloy C276 / UNS N10276 / DIN 2.4819

High Resistant Ni-Cr-Moly Alloy

Alloy C276 Data Sheet

Introduction

Hastelloy C276 is Nickel Chromium Molybdenum alloy with high resistance to oxidizing & reducing medium. Alloy C276 retains good mechanical strength at elevated high temperatures. Due to its resistance to vast number of compounds, it is used in most chemical processes with good fabrication, weldability as well.

Chemical Composition (Typical)

Element	Limits	
	min	max
Carbon	0.000	0.010
Manganese	0.000	1.000
Silicon	0.000	0.080
Sulphur	0.000	0.030
Phosphorus	0.000	0.040
Iron	4.000	7.000
Chromium	14.500	16.500
Molybdenum	15.000	17.000
Cobalt	0.000	2.500
Vanadium	0.000	0.350
Tungsten	3.000	4.500
Nickel	38.000	46.000

Mechanical Properties (Typical)

Parameter	Value
Yield 0.2 % (Mpa/Nmm ²), Min	283
Tensile (Mpa/Nmm ²), Min	690
Elongation (% in 50MM), Min	40
Reduction Area(%), Min	--
Hardness (HRB), Max	100*

Physical Properties

Parameter	Value
Density (Kg/m ³)	8890
Elastic Modulus (Gpa)	205.5
*Co-eff of Expansion ($\mu\text{m}/\text{m}/^\circ\text{C}$)	13.4
*Thermal Condc. (W/m.K)	19
*Electric Resistivity (n Ω .m)	1300

*Note : @500°C

Corrosion Data

With addition of tungsten, Alloy C276 is aggressively resistant to many oxidizing & reducing medium like ferric and cupric chlorides, chlorine, formic, acetic acids, acetic anhydride, seawater and brine solutions. It is resistant to crevice, pitting & stress corrosion cracking. As well Hastelloy C276 is among few composition that withstands the corrosive effects of wet chlorine gas, hypochlorite, and chlorine dioxide.

Equivalent Grade Designation

Hastelloy C276
Alloy C276
UNS N10276
W. Nr./EN 2.4819
DIN 2.4819
AWS 054
NiMo16Cr 15 W
ND 16 C 15 W

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Available Product Forms

Round, Square, Hexagon ,Flat Bars & Wires
Seamless / Welded Pipes
Seamless / Welded Tubes
Hot & Cold Rolled Plates & Sheets
Forged Bars
Hot Forged Fasteners
Forged Flanges
Butt-Weld Pipe Fittings
Socket-Weld/Forged Pipe Fittings
Machined Components
Ferrule Compression Fittings
Welding Consumables

Common Manufacturing Specifications

ASTM B333, ASTM B335, ASTM B366, ASTM B564, ASTM B619, ASTM B622, ASTM B626, ASME SB333, ASME SB335, ASME SB366, ASME SB564, ASME SB619, ASME SB622, ASME SB626

Alternate to Alloy

Alloy C22 & Alloy 2000 is good alternative to hastelloy C276.

Applications & Industries

Chemical & Pharmaceutical Industries
Waster Treatment plants
Marine Applications
Herbicides, Insecticides, Ethylene glycol and Ethyl benzene production units
Valves, Pumps, Fasteners - Nuts, Bolts, Washer, Anchor Rods
Paper & Pulp Production
Acetic acid production

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