



Hastelloy® C-276 (Alloy C-276), UNS N06985

Shaped, Flat, Square, Round, Fine Wire, Plated and Bare Wire

ASTM B582

Hastelloy® C-276 Alloy Description

 [Get A Quote](#)

Alloy C-276, a nickel-molybdenum-chromium-tungsten alloy with excellent general corrosion resistance and good formability. It resists the formation of grain boundary precipitates in the weld-heat affected zone making it a candidate for most chemical and petrochemical processing applications in the as-welded condition. C-276 is readily fabricated by welding using methods similar to those utilized for nickel-based alloys.

Applications

Marine hardware

Chemical processing components

Agrichemical and petrochemical production.\

Chemistry Typical

Nickel: Balance

Chromium: 14.50 – 16.50

Molybdenum: 15.00 – 17.00

Iron: 4.00 – 7.00

Tungsten: 3.00 – 4.50

Cobalt: 2.50 max

Manganese: 1.00 max

Carbon 0.010 max

Vanadium: 0.35 max

Phosphorus: 0.040 max

Silicon: 0.08 max

Sulfur: 0.030 max

Physical Properties

Density: 0.321 lbs/in³, 8.89 g/cm³

Mean Coefficient of Thermal Expansion: in/in/°F (mm/m/°C):

70- 212°F (20- 100°C): 6.2×10^{-6} (11.2)

Thermal Conductivity: BTU-in/h-ft-°F (W/m-°K):

70°F (21°C): 71(10.2)

Modulus of Elasticity: KSI (MPa)

29.8×10^3 (205×10^3) in tension

Melting Point: 2500°F (1371°C)

Mechanical Properties at Room Temperature

Annealed Typical

Ultimate Tensile Strength: 100 KSI min (690 MPa min)

Yield Strength: (0.2% offset) 45 KSI min (310 MPa min)

Elongation: 40% min

Hardness: Rb 100 min (aim)

Properties Tempered

Alloy C-276 can be cold rolled to achieve the temper properties required by specific customers and/or manufacturing requirements. Contact Ulbrich Wire for details.

Additional Properties

Corrosion Resistance

Refer to NACE (National Association of Corrosion Engineers) for recommendations

Standard Wire Finishes

Extra Clean: (XC) Extra clean is also referred to as “bright annealed” or “bright annealed and cold rolled”

Grease (round wire only): Drawn in a heavy grease produces an “Ultra bright” finish for decorative applications

Soap (round wire only): Soap is used as a lubricant in the drawing process and is not removed. It acts as a lubricant during customer part forming operation. A soap finish is available in tempered products.

Plated: Many plating options are available.

*Special finishes are available: Contact Ulbrich Wire Sales with special finish and plating requests.

Forms

Continuous Coils

Cut to lengths

Precision cutting

Heat Treatment

Alloy C-276 Alloy cannot be hardened heat treating

Welding

For best results refer to: SSINA’s “Welding of Stainless Steels and Other Joining Methods

Hastelloy® C-276 is a registered trademark of Haynes Alloys

Limitation of Liability and Disclaimer of Warranty: In no event will Ulbrich Stainless Steels and Special Metals, Inc., be liable for any damages arising from the use of the information included in this document or that it is suitable for the ‘applications’ noted. We believe the information and data provided to be accurate to the best of our knowledge but, all data is considered typical values only. It is intended for reference and general information and not recommended for specification, design or engineering purposes. Ulbrich assumes no implied or express warranty in regard to the creation or accuracy of the data provided in this document.

Copy