

# Hastelloy C-276 Datasheet

Hastelloy C-276 is a nickel alloy with excellent resistance to strong oxidizers and corrosive chemicals in industrial use.

<b>Alloy / Grade</b>	Hastelloy C-276
<b>Common Forms</b>	Plate, Sheet, Pipe, Flanges , Bar, Wire.
<b>Key Feature</b>	Resistant to wet chlorine, hypochlorite, and chlorine dioxide.
<b>Service Focus</b>	One of the few materials that can withstand the corrosive effects of wet chlorine gas, hypochlorite, and chlorine dioxide.

## 1. Product Overview

Hastelloy C-276 is a nickel-molybdenum-chromium superalloy with an addition of tungsten. It is designed to have excellent corrosion resistance in a wide range of severe environments. It is often considered the most versatile corrosion-resistant alloy available.

Grade	Core Description	Typical Service Focus
Hastelloy C-276	Hastelloy C-276 is a nickel-molybdenum-chromium superalloy with an addition of tungsten. It is designed to have...	In harsh chemical processing environments where "upset" conditions are likely to occur, Hastelloy C-276...
Supply Capability	Plate, Sheet, Pipe, Flanges , Bar, Wire.	Standard mill forms, cut-to-size material and project supply
Technical Review	Confirm final values by product form, heat treatment and material certificate	One of the few materials that can withstand the corrosive effects of wet chlorine gas, hypochlorite, and...

## 2. Key Features

- In harsh chemical processing environments where "upset" conditions are likely to occur, Hastelloy C-276 offers the best insurance. Its resistance...
- One of the few materials that can withstand the corrosive effects of wet chlorine gas, hypochlorite, and chlorine dioxide.
- The high Molybdenum (15-17%) content provides outstanding resistance to localized corrosion (pitting) even in severe chloride environments.
- Excellent resistance to sulfide stress cracking and stress-corrosion cracking in sour gas environments (hydrogen sulfide).

<b>Further information under:</b>	<a href="https://www.nickelcasting.com/nickel-alloys/hastelloy-nickel-alloys/hastelloy-c-276/">https://www.nickelcasting.com/nickel-alloys/hastelloy-nickel-alloys/hastelloy-c-276/</a>
<b>Home page:</b>	<a href="http://www.nickelcasting.com">www.nickelcasting.com</a>
<b>Email:</b>	<a href="mailto:ni@Nickelcasting.com">ni@Nickelcasting.com</a>

## Technical Data

The following values are provided as general reference data for engineering review and procurement planning. Confirm final values against the applicable specification, product form, heat treatment condition and material certificate.

### 3. Chemical Composition (%)

Element	Content (%)
Nickel (Ni)	57.0 min (Balance)
Molybdenum (Mo)	15.0 - 17.0
Chromium (Cr)	14.5 - 16.5
Iron (Fe)	4.0 - 7.0
Tungsten (W)	3.0 - 4.5
Manganese (Mn)	1.0 max
Carbon (C)	0.01 max

### 4. Standard Specifications

Product Form	ASTM / ASME Standards
Plate, Sheet, Strip	ASTM B575, ASME SB575
Pipe (Seamless)	ASTM B622, ASME SB622
Pipe (Welded)	ASTM B619, ASME SB619
Bar & Rod	ASTM B574, ASME SB574
Fittings	ASTM B366, ASME SB366
Forgings	ASTM B564, ASME SB564

### 5. Mechanical Properties - Typical at Room Temperature

Property	Typical Values (Room Temp)
Tensile Strength	100 - 115 ksi (690 - 795 MPa)
Yield Strength (0.2% Offset)	40 - 55 ksi (275 - 380 MPa)
Elongation	40 - 65 %
Hardness (Brinell)	150 - 200 HB

Note: Values are typical or specification reference values. Purchase requirements should be confirmed against the required standard, drawing and material test report.

# Applications and Ordering Information

Use this section to define inquiry requirements and accelerate technical confirmation for Hastelloy C-276 products.

## 6. Typical Applications

Industry / Area	Typical Components
Industrial Service	High-strength bolts, nuts, and studs that prevent failure, stress cracking, and seizing in extreme chloride environments.
Chemical / Process Equipment	Liners, ducts, dampers, scrubbers, stack-gas reheaters, and fans in Flue Gas Desulfurization (FGD) plants.
Oil, Gas & Marine	Heat exchangers, reaction vessels, evaporators, and transfer piping handling mixed acids and chlorides.
High-Temperature / Power	Digesters and bleach plants handling chlorine dioxide and hypochlorite solutions.
Precision Components	Evaporators and crystallizers treating industrial and municipal waste streams.

## 7. Available Supply Forms

Plate	Sheet	Pipe
Flanges	Bar	Wire.
Forgings	Custom Cutting	Project Supply

## 8. Information to Include When Requesting a Quote

- Required grade: Hastelloy C-276, with ASTM / ASME / AMS specification if applicable.
- Product form: pipe, tube, plate, sheet, bar, fittings, flanges, forgings or machined parts.
- Dimensions: outside diameter, wall thickness, length, width, thickness or drawing number.
- Quantity, delivery destination and required delivery schedule.
- Special requirements: cutting, machining, heat treatment, NDT, PMI, test report or material certificate.

Company Information	
Address	Shanghai, China
Email	ni@Nickelcasting.com
Home Page	www.nickelcasting.com
Product Page	<a href="https://www.nickelcasting.com/nickel-alloys/hastelloy-nickel-alloys/hastelloy-c-276/">https://www.nickelcasting.com/nickel-alloys/hastelloy-nickel-alloys/hastelloy-c-276/</a>

## Disclaimer

This datasheet is provided for general reference only. Actual values may vary by product form, heat treatment, manufacturing condition and applicable specification. Please contact us for confirmed specifications, test reports and material certificates before ordering.