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INDUSTRIAL METAL MATERIALS

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PRODUCT SPECIFICATIONS · PIPE

Hastelloy C-276 Pipe

Chemical composition, mechanical properties and material characteristics

Features

- Hastelloy C276 pipe is made of a high-performance metal material with excellent corrosion resistance and mechanical properties.
- It is widely used in metal materials under high temperature, high pressure, and corrosive environments, such as petrochemical, chemical fertilizer, nuclear industry and other fields.

Typical Applications

- A workhorse corrosion alloy for severe chemical duty—including contaminated acids, wet chlorine environments and mixed oxidizing / reducing media—where ordinary stainless steel is inadequate. Confirm against the exact acid mix, oxidant level and crevice geometry.

Product Parameters

Product Name	Hastelloy C-276 Pipe
Type	Ni-Cr-Mo Alloy (Hastelloy C-276)
Standard	UNS N10276; ASTM B575 / B619 / B622 / B626
Surface	Black, Bright Polished, Rough Turning, Matt Surface Treatment, No.4, BA, etc.
Delivery Condition	Annealed / solution annealed; other tempers available by agreement.
Scope of Application	A workhorse corrosion alloy for severe chemical duty—including contaminated acids, wet chlorine environments and mixed oxidizing / reducing media—where ordinary stainless steel is inadequate. Confirm against the exact acid mix, oxidant level and crevice geometry.
Certificate	ISO / SGS / BV and EN 10204 3.1 MTC available; third-party inspection and PMI can be arranged per purchase order.
Production Technology	Hot rolling or cold rolling / drawing according to product form; solution treatment and pickling / passivation applied where corrosion performance or surface quality require it. Seamless or welded supply routes depending on size; cut-to-length and end preparation available.
Edge Processing	Plain, beveled or threaded ends available on request; end finishing and length tolerance per order.
Outer Diameter	Round Pipe
Square Pipe	10*10mm-100*100mm
Rectangular Pipe	10*20mm-50*100mm
Wall Thickness	0.6mm-6.0mm
Length	1-6 meters, Length can be customized

Chemical Composition

C	P	Si	S	V	Cr	Mn	Fe	Co	Ni	Mo	W
0.01 max	0.08 max	0.04 max	0.03 max	0.35 max	14.5 - 16.5	1.0 max	4.0 - 7.0	2.5 max	Remainder	15.0 - 17.0	3.0 - 4.5

Mechanical Properties

Tensile Strength (ksi)	0.2% Yield Strength (ksi)	Elongation% in 2 inches
100	41	40

Physical Performance

	Units	Temperature in°C
Density	8.69 g/cm³	22°
Specific Heat	0.102 Kcal/kg.C	Room
Melting Range	1323-1371°C	-
Modulus of Elasticity	205 KN/mm²	Room
Electrical Resistivity	129.5 μΩ.cm	24°
Coefficient of Expansion	11.2 μm/m °C	24-93°
Thermal Conductivity	10.2 w/m-° K	38°

Selection note: match grade to medium, temperature, chloride level and whether as-welded corrosion service is required.

Related Properties

Corrosion Resistance	Broad resistance across many oxidizing and reducing chemical media, wet chlorine environments and contaminated acids where ordinary stainless is inadequate. Still confirm against the exact acid mix, oxidant level and crevice geometry.
Formability	Can be formed and welded with nickel-alloy practices; cold work hardens the alloy quickly, so plan annealing and tooling accordingly.
Weldability	Generally weldable with common fusion processes. For as-welded corrosive service, prefer low-carbon (L) or stabilized grades, control heat input, and specify filler that preserves corrosion resistance in the weld metal and HAZ. Post-weld cleaning and passivation improve finished performance.
Surface & Cleanliness	Final corrosion behavior is strongly affected by surface finish, free iron contamination and weld discoloration. Pickling, passivation or electropolishing after fabrication is often as important as grade selection for sanitary, marine and chemical equipment.
Selection Notes	A workhorse corrosion alloy for severe chemical duty. Compare with C-22 / C-2000 when oxidizing media dominate, or with B-series grades for specific reducing-acid niches.

Material guidance for your next project

Send your grade, size and application requirements to our team.

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