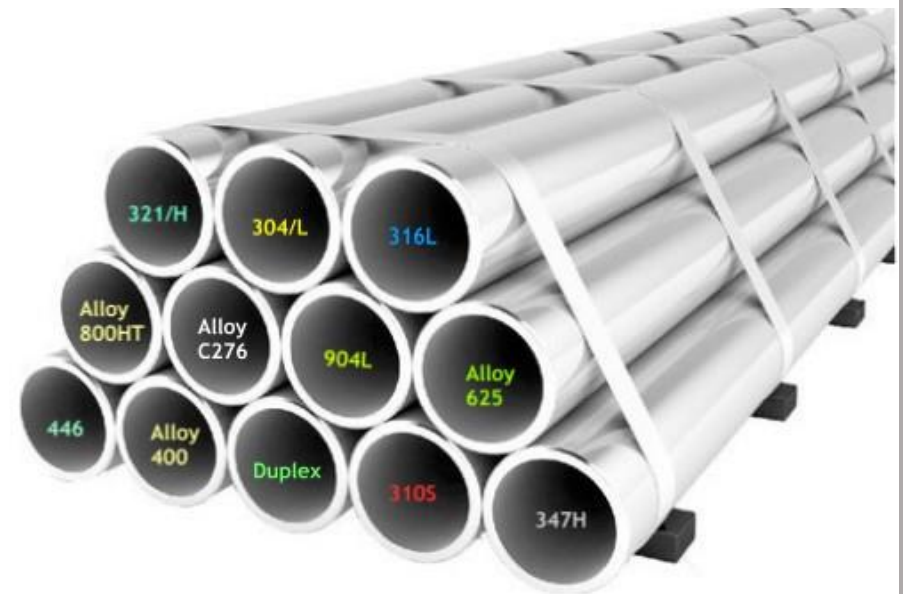


ALLOY 20

Datasheet for Alloy 20

- Pipes & Tubes
- Sheets & Plates
- Bars & Rods, Forgings
- Fittings & Flanges
- Nuts & Bolts
- Valves



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We are a metal supplier of Hastelloy, Monel, Inconel, Incoloy, Stainless Steel, Duplex, Super Duplex, Nickel Alloys and more.
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Datasheet for Alloy 20

UNS N08020, 2.4660

What is Alloy 20?

- Nickel Alloy 20 (UNS N08020 or DIN W.Nr. 2.4660), also known as Incoloy 20, is a nickel-iron-chromium alloy with additions of copper and molybdenum. It has exceptional corrosion resistance to sulfuric acid, chloride stress-corrosion cracking, nitric acid, and phosphoric acid. Alloy 20 can be readily hot-formed or cold-formed to valves, pipe fittings, flanges, fasteners, pumps, tanks, as well as heat exchanger components. The hot forming temperature should be in the range of 1400-2150°F (760-1175°C). Usually, the heat treatment of annealing should be conducted at the temperature range of 1800-1850°F (982-1010°C). Alloy 20 is widely used for the production of gasoline, organic & inorganic chemicals, pharmaceutical processing, and food industry.

Alloy 20 Product Specification

Product	Nickel Alloy 20
Equivalents	Incoloy 20, UNS N08020, DIN W.Nr. 2.4660
Items	Pipe, Tubes, Tubing, Fittings, Flanges, Valves, Fasteners, Sheet, Square Bar, Threaded Bar, Plate, Hexagon Bar, Fasteners and Fixings, Round Bar, Flat Bar, Rebar, Angle, Tube & Pipe, Wire
Size	1/4" - 60"
Pipe Type	Seamless, Welded, ERW, Fabricated, Custom Size Pipes
Specifications	ASTM, ASME, DIN, GOST, JIS
Certification	EN 10204 3.1
Fittings Type	Butt Weld, Screwed & Socket Weld, Flanges, Instrumentation
Other Fittings	Elbows, Tees, Reducers, Caps, Stub Ends, Flanges (ANSI, Table E, D and H), Nuts, Bolts, Screws, Threaded Bars

Alloy 20 (UNS N08020 / DIN 2.4660) Product Forms & Standards

Product Form	Standard
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Alloy 20 Bar, Rod and Wire	ASTM B473, B472, B462
Alloy 20 Plate, Sheet and Strip	ASTM A240, A480, B463, B906
Alloy 20 Seamless Pipe and Tube	ASTM B729, B829
Alloy 20 Welded Pipe	ASTM B464, B775
Alloy 20 Welded Tube	ASTM B468, B751
Alloy 20 Buttweld Pipe Fittings	ASTM B366
Alloy 20 Forged Flanges and Forged Fittings	ASTM B462, B472

Chemical, Mechanical & Other Properties of Nickel Alloy 20

Chemical Composition of Alloy 20

Element	Value %
Nickel	32.0-38.0
Chromium	19.0-21.0
Copper	3.0-4.0
Molybdenum	2.0-3.0
Iron	Balance
Carbon	≤0.07
Niobium + Tantalum	8*C-1.0
Manganese	≤2.00

Phosphorus	≤0.045
Sulfur	≤0.035
Silicon	≤1.00

Mechanical & Physical Properties of Alloy 20

Density, g/cm ³	8.1
Melting range, °C	1350 – 1370
Tensile strength, min, Mpa	550
Yield strength, 0.2% offset, min, Mpa	240
Elongation, %, min	30
Hardness, HB	220-235

- Alloy 20 resists pitting and chloride ion corrosion, better than 304 stainless steel and on par with 316L stainless steel. Its copper content protects it from sulfuric acid. Alloy 20 is often chosen to solve stress corrosion cracking problems, which may occur with 316L stainless.

Types of Nickel Alloys

ASTM/AISI	UNS No	EN	DIN	JIS
Incoloy 800	N08800	1.4558	X2NiCrAlTi3220	NCF2B
Incoloy 800H	N08810			
Incoloy 825	N08825	2.4858	NiCr21Mo	NCF825
Inconel 600	N06600	2.4816	LC-NiCr12Fe	NCF1B

Hastelloy B	N10001			N12MV
Hastelloy B2	N10665	2.4617	NiMo28	
Hastelloy C				
Hastelloy C276	N10276	2.4819	NiMo16Cr15W	NW 0276
Hastelloy C4	N06455	2.461		
Hastelloy C22	N06022	2.4602		
Inconel 625	N06625	2.4856	NiCr22Mo9Nb	
Inconel 718	N07718	2.4668		
Monel 400	N04400	2.4360		NW 4400
Nickel 200	N02200	2.4060		

- **Trademark Notice:** Some names are trade names and/or trademarks of specific manufacturers. We are not affiliated with any manufacturer(s). Orders will be filled to meet specifications from any available source(s). Names are listed solely for reference to help identify products consistent with listed specifications.

Manufacturing Alloy 20 Products

Alloy 20 Sheet	Alloy 20 Plate Cuttings/Profiles	Alloy 20 Nuts, Bolts and Fasteners
Alloy 20 Plate	Alloy 20 Foil, Coil	Alloy 20 Wire
Alloy 20 Blocks/Slabs	Alloy 20 Strip	Alloy 20 Ingot
Alloy 20 Rod/Bar	Alloy 20 Pipes and Tubes	Alloy 20 Forgings and Castings
Alloy 20 Flanges	Alloy 20 Forged Fittings	Alloy 20 Buttweld Fittings

About Metallica Metals – The Steel Pipes Factory

- Established in 1975, the Metallica Metals Group (The Steel Pipes Factory) has its operations spread across major cities in India. We are a pioneer in the stainless steel pipes, nickel alloy products, titanium products, carbon steel pipes and alloy steel pipes manufacturing and processing industry. Our products including pipe fittings, flanges, pipes, sheet plates and valves are exported to over 70 countries across the world, while in India we have supplied to even the remote areas. With over 250 tons of sale in stainless steel and carbon steel pipes every day, Metallica has emerged as a prominent vendor for many buyers in India and Overseas
- **More than 3000 tons ready from stock and new production ready in just a few weeks.**
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Our Key Products

STAINLESS STEEL & NICKEL ALLOYS

Pure Nickel Alloys

Monel Alloys (Ni-Cu Alloys)

Inconel (Ni-Cr-Mo) Alloys

Incoloy Alloys (Ni-Cr-Fe)

Hastelloy Alloys

Stainless Steel 304/304L

Stainless Steel 309S/309H

Stainless Steel 310/310S

Stainless Steel 316/316L

Stainless Steel 316Ti

Stainless Steel 317/317L

Stainless Steel 321/321H

Stainless Steel 347/347H

Stainless Steel 904L

Duplex Steels (UNS S32205, UNS S31803)

Super Duplex Steels (UNS S32760 / UNS S32750)

Stainless Steel 254 SMO (UNS S31254 / 1.4547)

INSTRUMENTATION TUBES & FITTINGS

Instrumentation Tube

Hydraulic Tubing

Seamless Tubing

Instrumentation Tube Fittings

Double Compression Tube Fittings

Precision Pipe Fittings

Needle & Gauge Valves

Manifold Valves

PRODUCTS

Steel Sheet & Plate

Steel Coil & Strip

Steel Pipes

Steel Tubes

Electropolish Tube

Heat Exchanger Tubes

Steel Bars/Rods & Wire

Fasteners (Nut, Bolt, Washer)

Steel Angle Bars

Hex Steel Bars

Round Steel Bars & Rod

Flat Steel Bars

Forgings, Rings & Forged Blocks

Stainless Steel Pipe

Stainless Steel Seamless Pipe

Stainless Steel Welded Pipe

Stainless Steel Tubes

Stainless Steel Furnace Tubes

Stainless Steel Seamless Tubing

Stainless Steel Heat Exchanger Tubes

Large Diameter Pipe

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