



Stainless Steel 321/321H

Henan Sheng He Pipe Industry Co., Ltd., have an experience spanning for over ten years, producing and supplying best-in-class products, minimize cost by getting manufacturing processes under one roof and delivering consignments on a daily basis only because of a diligent and dedicated team. We are manufacturers, suppliers and exporters of Stainless Steel 321/321H material.

UNS - S32100 / S32109

SS 321 is titanium settled austenitic stainless steel with greater general corrosion resistance. It has phenomenal resistance to intergranular corrosion after presentation to temperatures in the chromium carbide precipitation scope of 800–1500°F (427–816°C).

The SS maintains oxidation to 1500°F (816°C) and has higher creep and stress rupture properties than SS 304 and 304L. It also maintains good low temperature toughness. SS 321H is the higher carbon (0.04–0.10) version of the SS. It was produced to improve creep resistance and for higher strength at temperatures above 1000°F (537°C). In most occurrences, the carbon content of the plate enables dual certification.

SS 321 cannot be hardened by heat treatment, just by cold working. It can be effectively welded and processed by standard shop fabrication practices.

Characteristics

- Oxidation resistant to 1600°F
- Stabilized against weld heat affected zone (HAZ) intergranular corrosion
- Resists polythionic acid stress corrosion cracking

Applications

- Aircraft piston engine manifolds and exhaust stacks
- Expansion joints
- Thermal oxidizers
- Refinery equipment
- High temperature chemical process equipment
- Food Processing equipment and storage



Sheng He Pipe Industry offers Stainless Steel 321/321H in a variety of forms, including:

- Pipe & Welded pipe
- Pipe fittings
- Seamless tube & Welded tube
- Flanges
- Bar
- Sheet
- Wire
- Plate
- Forgings
- Weld Rod

Chemical Composition %

Grade	C	N	Si	P	S	Cr	Mn	Ni	Fe	Ti
321	0.08 max	0.10 max	1.0 max	0.045 max	0.03 max	17.0 - 19.0	2.0 max	9.0 - 12.0	Remainder	5x(C+N) -0.70
321H	0.04 - 0.10	0.10 max	1.0 max	0.045 max	0.03 max	17.0 - 19.0	2.0 max	9.0 - 12.0	Remainder	4x(C+N) -0.70

Mechanical Properties

Tensile Strength (ksi)	0.2% Yield Strength (ksi)	Elongation% in 2 inches
75	30	40

Physical Properties

	Units	Temperature in °C
Density	7.92 g/cm ³	Room
Specific Heat	0.12 Kcal/kg.C	22°
Melting Range	1371 - 1400 °C	-
Modulus of Elasticity	193 KN/mm ²	20°



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	Units	Temperature in °C
Electrical Resistivity	72 $\mu\Omega\cdot\text{cm}$	Room
Coefficient of Expansion	16.6 $\mu\text{m}/\text{m } ^\circ\text{C}$	20 - 100°
Thermal Conductivity	16.0 $\text{W}/\text{m } ^\circ\text{K}$	20°

ASTM Specifications

Pipe / Tube (SMLS)	Sheet / Plate	Bar	Forging	Fitting
A 213, A 249	A 167, A 240	A 276	A 182	A403