



HENAN SHENG HE PIPE INDUSTRY CO., LTD

WEB: [WWW.SHPIPEINDUSTRY.COM](http://WWW.SHPIPEINDUSTRY.COM)

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## Duplex S32205

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 Duplex S32205 material.

### SPECIFICATIONS

**UNS Number:** S32205, F60

**Standards:** ASTM A 182, A 240, A 276, A 479, A 789, A 790, A 815

ASME SA 182, SA 240, SA 479, SA 789

**Werkstoff Number:** Norsok MDS D45 Grade F51, EN 1.4462

**Others:** NACE MR0175

UNS S32205 is a duplex grade with a ferritic-austenitic microstructure. The alloy consists of around 40-50% ferrite in the annealed condition. The duplex microstructure has the high strength of the ferritic grades whilst retaining the corrosion resistance of the austenitic grades. It is not uncommon to see the metal used as a practical solution to chloride-induced stress cracking, which is the achilles' heel of stainless steel. UNS S32205 has superior resistance to chloride pitting and crevice corrosion as compared to 317L stainless steel. The alloy has outstanding corrosion resistance to seawater and most concentrations of sulphuric acid. In addition, UNS S32205 duplex stainless is also resistant to sulphide stress corrosion cracking (sour-gas environments). The high quality and therefore performance of UNS S32205 is widely attributed to the high levels of chromium present as well as nitrogen and molybdenum.

### APPLICATIONS

- .Seawater systems
- .Seawater pumps and valves
- .Chemical process vessels, piping, and heat exchangers
- .FGD scrubber systems
- .Pulp mill digesters, bleach washers
- .Food process equipment
- .Oil field piping



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## PROPERTIES

**Density:** 7.1 g/cm<sup>3</sup>

**Melting range:** 1385-1443°C

**Poisson's ration:** 0.3

**Electrical resistivity:** 8 x10<sup>-7</sup> Ωm

## ASTM Specifications

ASTM (American Society for Testing and Materials) for various products made out of Duplex S32205 are as follow

Pipe Seamless	Pipe Welded	Tube Seamless	Tube Welded	Sheet/Plate	Bar	Forging	Fitting	Wire
A790	A790	A789	A789	A240	A276	A182	A815	—

## Chemical Composition, %

Cr	Ni	Mo	C	N
22.0-23.0	4.50-6.50	3.00-3.50	.030 Max	0.14-0.20
Mn	Si	P	S	Fe
2.00 Max	1.00 Max	.030 Max	.020 Max	Balance

## Specified Tensile Properties ASTM A240

Ultimate Tensile Strength, ksi Minimum	.2% Yield Strength, ksi Minimum	Hardness Max.
95	65	31 Rockwell C