

SUPER DUPLEX 32760 / UNS S32760/ DIN 1.4501

Exceptional Corrosion Resistance Super Duplex Steel

32760 Data Sheet

Introduction

Material 32760 is described as a super duplex stainless steel with a microstructure of 50:50 austenitic and ferrite. The steel combines high mechanical strength and ductility with outstanding corrosion resistance to marine environments and a wide diverse range of oil & gas production environments.

Chemical Composition (Typical)

Element	Limits	
	min	max
Carbon	0.000	0.030
Manganese	0.000	1.200
Silicon	0.000	0.800
Phosphorus	0.000	0.035
Sulphur	0.000	0.020
Chromium	24.000	26.000
Molybdenum	3.000	5.000
Nickel	6.000	8.000
Copper	0.500	1.000
Nitrogen	0.200	0.320
Tungsten	0.500	1.000
Iron	Remainder	

Mechanical Properties (typical)

Parameter	Value
Yield 0.2 % (ksi/Mpa), Min	530
Tensile (ksi/Mpa), Min	730
Elongation (% in 50mm), Min	25
Reduction in Area, %	50
Hardness (HB), Max	290

Physical Properties

Parameter	Value
Density (Kg/m ³)	7800
Elastic Modulus (Gpa)	200
Co-eff of Expansion ($\mu\text{m}/\text{m}/^\circ\text{C}$)	13
Thermal Condc. (W/m.K)	15
Electric Resistivity (n Ω .m)	800

Corrosion Data

Super duplex 32760 offers high resistance to pitting corrosion, crevice corrosion and stress corrosion cracking. For optimum corrosion resistance a surface finish of pickled or machined is recommended. The alloy is supplied with a PREN (Pitting Resistance Equivalent) at >40.0 which guarantee high resistance to pitting resistance.

Equivalent Grade Designation

32760
UNS S32760
F55
DIN EN 1.4501
X2CrNiMoCuWN25-7-4

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Available Product Forms

Round, Square, Hexagon & Flat Bars
Seamless / Welded Pipes
Seamless / Welded Tubes
Hot & Cold Rolled Plates & Sheets
Forged Bars
Buttweld Pipe Fittings
Forged Fittings
Ferrule Compression Fittings
Forged Flanges
Valves & Gauges

Common Manufacturing Specifications

ASTM A182, A240, A276, A314, A473, A479, A789, A790, A815, A928, A988
SAE J405

Alternate to Alloy

904L Better formability is needed, with similar corrosion resistance and lower strength.
2205 High corrosion resistance & strength not needed. More available & lower cost.
6%Mo Higher corrosion resistance required, but with lower strength & better formability.
316L High corrosion resistance & strength not needed. More available & lower cost.
Ni Alloys Corrosion resistance higher than 2507 is required, & higher cost is acceptable.

Applications & Industries

Oil and Gas industry equipment
Chemical process industries
Marine Industry and Shipbuilding
Pollution Control
Pulp and Paper Industry
Agrochemicals
Civil Engineering

Excellence Inherent

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