

ZERON 100 / UNS S32760/ DIN 1.4501

Exceptional Corrosion Resistance Super Duplex Steel

ZERON100 Data Sheet

Introduction

ZERON 100 is a highly alloyed super duplex stainless steel for use in aggressive environments. Its combination of properties makes ZERON 100 the optimum choice in a range of industries. ZERON 100 is not recommended for uses which involve extended exposure to temperatures greater than 300°C (572°F) as this causes a substantial reduction in toughness.

Chemical Composition (Typical)

Element	Limits	
	min	max
Carbon	0.000	0.030
Manganese	0.000	1.000
Silicon	0.000	1.000
Phosphorus	0.000	0.030
Sulphur	0.000	0.010
Chromium	24.000	26.000
Molybdenum	3.000	4.000
Nickel	6.000	8.000
Copper	0.500	1.000
Nitrogen	0.200	0.300
Tungsten	0.500	1.000
Iron	Remainder	

Mechanical Properties (typical)

Parameter	Value
Yield 0.2 % (ksi/Mpa), Min	550
Tensile (ksi/Mpa), Min	750
Elongation (% in 50mm), Min	25
Reduction in Area, %	50
Hardness (HB), Max	270

Physical Properties

Parameter	Value
Density (Kg/m ³)	7800
Elastic Modulus (Gpa)	200
Co-eff of Expansion (μm/m/°C)	13
Thermal Condc. (W/m.K)	15
Electric Resistivity (nΩ.m)	800

Corrosion Data

ZERON 100 is highly resistant to corrosion in a wide range of organic and inorganic acids. The copper content gives excellent resistance to corrosion in many non-oxidizing acids. It is also highly resistant to strong alkalis. Commercial acid applications often contain chlorides and other impurities which can cause corrosion of some stainless steels. ZERON 100 offers much improved corrosion performance in these environments.

Equivalent Grade Designation

ZERON 100
UNS S32760
32760
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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