

# CORROSION-RESISTANT STEELS - FERRITIC-AUSTENITIC (DUPLEX) STEELS

## Application Segments

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Oil & Gas / CPI

## Available Product Variants

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Long Products\*

Semi-Finished Products / Billet

\* Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

## Product Description

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BÖHLER A911SA is a ferritic-austenitic stainless steel of Type 25%Cr with PREN of min. 40. It offers excellent corrosion resistance against general corrosion, stress corrosion cracking, corrosion fatigue, pitting, crevice and erosion corrosion and possessing very high mechanical strength properties. However, it contains less copper compared to other super Duplex SS but a deliberate addition of tungsten instead, claimed to selectively improve corrosion resistance. Good weldability, post weld heat treatment not necessary. Max. temperature for long periods of service: 280°C (535°F) / (300°C/570°F possible for short periods).

Surface condition for optimum corrosion resistance: pickled or machined.

Components in offshore, waste water, sea water desalination and chemical plants with aggressive chloride-containing media e.g. heat exchangers, separator parts, compressor and pump components, turbine blades.

## Process Melting

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Airmelted

## Applications

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- > Components for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- > CPI (incl. LNG, Urea)
- > Other Oil and Gas + CPI components
- > Valves and Actuators
- > Chemical industry - general
- > Filling
- > Components for the recycling industry
- > Fasteners, Bolts, Nuts
- > Pumps and High Pressure Components
- > Well Completion Tools
- > Well Logging Tools
- > Components for food processing and animal feed
- > Flowlines & Connectors
- > Tubular Products, Flanges, Fittings
- > Wellhead, X-mas trees and Manifolds (incl. Tubing hangers), BOPs
- > Drilling tools and components

### Technical data

Material designation		Standards	
F55	Market grade	10088-3	EN ISO
1.4501	SEL	A182/A182M	ASTM
X2CrNiMoNCuW25-7-4	EN	A276/A276M	
S32760	UNS	A479/A479M	
		MDS D57	NORSOK

### Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	W	Cu	N
max. 0.030	max. 1.00	max. 1.00	max. 0.030	max. 0.010	24.0 to 26.0	3.0 to 4.0	6.0 to 8.0	0.50 to 1.00	0.50 to 1.00	0.20 to 0.30

Refers to NORSOK MDS D57-UNS 32760 | PREN = % Cr + 3.3 x % Mo + 16 x % N min 40.

### Delivery condition

#### Solution Annealed + Quenched

Hardness (HB)	max. 310   hot finished or cold finished
Tensile Strength (MPa)	min. 750   hot finished or cold finished
Yield Strength (MPa)	min. 550   hot finished or cold finished

#### Round Bars and Wire Rod (if any)

Diameter*		mm	
<b>ROLLED</b>			
5.00	-	-	13.50
12.50	-	-	130.00
<b>FORGED</b>			
131.10	-	-	200.00

\* Diameter 5.00 - 13.50 mm available as Wire Rod.

Diameter 12.5 - 130 mm round bars.

More information regarding MOQ, lengths and tolerances upon request. Flat bars on request.

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.

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