

CORROSIONS-RESISTANT STEELS - AUSTENITIC STEELS AND NON MAGNETIC STEELS

Application Segments

Oil & Gas/CPI

Available Product Variants

Long Products

Product Description

BÖHLER A405 is a stainless austenitic Cr-Ni-Mo steel with nitrogen content and extremely low carbon content. Resistant to intergranular corrosion up to 400°C.

Heat treatment after welding is not required. Required surface finish: pickled. Very good cold formability. Highly polishable.

For components with the highest resistance to boiling concentrated nitric acid and equipment in contact with solutions containing high levels of chloride at high temperatures, as well as for highly stressed equipment in the urea industry.

The chemical composition has been optimised for specific uses in urea plants. It is a 310L modified austenitic stainless steel with low carbon, low silicon and high nitrogen additions in order to stabilize and strengthen the austenitic phase. The alloy is particularly designed for improved corrosion resistance properties in urea carbonate environments. The grade is also well designed for resistance in wet corrosive conditions due to its high contents of chromium, molybdenum and nitrogen (PREN > 33). BÖHLER A405 is designed for the fabrication of lining interiors in Urea units or complementary products (pipes, fittings...). The grade can be used for urea strippers.

Process Melting

Airmelted + ESR

Applications

- > Components for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)

 > Other Oil and Gas + CPI components

 > Oil & Gas / CPI
- > CPI (incl. LNG, Urea)

 > Oil & Gas, CPI & Renewables

 > Tubular Products, Flanges, Fittings

Technical data

Material designation		Standards	
1.4466	SEL	10088-3	EN ISO
X1CrNiMoN25-22-2	EN	A182/A182M	ASTM
S31050	UNS		
A182-F310MoLN	ASTM		

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	N
max. 0.030	max. 0.40	max. 2.00	max. 0.030	max. 0.015	24.0 to 26.0	2.00 to 3.00	21.0 to 23.0	0.10 to 0.16

Related to ASTM A182.

Delivery condition

Solution Annealed + Quenched

Tensile Strength (MPa)	min. 540 min
Yield Strength (MPa)	min. 255 min

Round Bars and Wire Rod (if any)

Diameter mm		
ROLLED		
12.50	-	130.00
FORGED		
130.10	-	600.00

More information regarding MOQ, length and tolerance upon request. Flat Bars upon 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.