

NI-BASE ALLOYS

Application Segments

Oil & Gas/CPI

Available Product Variants

Long Products*

Semi-Finished Products / Billet

Open Die Forgings

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

Product Description

BÖHLER L925 (UNS N09925) is an age hardenable nickel-iron-chromium alloy with additions of molybdenum, copper, titanium and aluminum. The alloy's chemical composition is designed to provide a combination of high strength and excellent corrosion resistance. The nickel content is sufficient for protection against chloride-ion stress corrosion cracking. The nickel, in conjunction with the molybdenum and copper, also gives outstanding resistance to reducing chemicals. The molybdenum aids resistance to pitting and crevice corrosion. The alloy's chromium content provides resistance to oxidizing environments. Titanium and aluminium form part of the precipitation hardening reaction that greatly increases hardness and strength of the alloy during heat treatment. The alloy has a high level of corrosion resistance in H₂S and CO₂ environments and resists general corrosion, pitting, crevice, intergranular corrosion and stress corrosion cracking. It is particularly useful in sour (H₂S containing) crude oil, natural gas, sulphuric acid, phosphoric acid and seawater. BÖHLER L925 offers high strength and can be used in high temperatures as it maintains strength at elevated temperatures. BÖHLER L925 meets the requirements of NACE MR0175 and API 6A CRA for sour service applications and is suitable for sour service and can be used for pressure containing and pressure controlling equipment in corrosive environments. Typical applications include packers, safety valves, pumps, hangers, connectors, fasteners and multiple downhole and surface applications.

Process Melting

VIM + VAR

Applications

- › Components for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- › Flowlines & Connectors
- › Tubular Products, Flanges, Fittings
- › Wellhead, X-mas trees and Manifolds (incl. Tubing hangers), BOPs
- › Drilling tools and components
- › Oil & Gas / CPI
- › Well Completion Tools
- › Valves and Actuators
- › Fasteners, Bolts, Nuts
- › Other Oil and Gas + CPI components
- › Well Logging Tools
- › Components for underground construction (drilling, shafts, etc.)

Technical data

Material designation		Standards	
Alloy 925	Market grade	B805	ASTM
2.4852	SEL	NACE MR0103 / ISO 17945	Others
NiCr20FeMo3TiCuAl	EN	NACE MR0175 / ISO 15156	
N09925	UNS	API 6A CRA	

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	Al	Nb	Fe
max. 0.025	max. 0.35	max. 1.00	max. 0.020	max. 0.003	19.5 to 22.5	2.50 to 3.50	42.0 to 46.0	1.50 to 3.00	1.90 to 2.40	0.10 to 0.50	0.08 to 0.50	min. 22

Refers to API Standard 6A CRA N07925

Delivery condition

Solution annealed + precipitation hardened	
Hardness (HRC)	26 to 38
Tensile Strength (MPa)	min. 965
Yield Strength (MPa)	758 to 965

Round Bars and Wire Rod (if any)

Diameter mm		
ROLLED		
12.50	-	101.60
FORGED		
101.70	-	355.60

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

Long Products: For additional specifications, technical requirements, and other dimensions, please contact our regional voestalpine BÖHLER sales companies.

Open Die Forgings: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact the business unit Open Die Forgings of voestalpine BÖHLER Edelstahl GmbH & Co KG.

Semi-Finished Products: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact the business unit Semi Finished Products of voestalpine BÖHLER Edelstahl GmbH & Co KG.

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.

voestalpine BÖHLER Edelstahl GmbH & Co KG
 Mariazeller Straße 25
 8605 Kapfenberg, AT
 T. +43/50304/20-0
 E. info@bohler-edelstahl.at
<https://www.voestalpine.com/bohler-edelstahl/de/>