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	
Alloy 925	Market grade
2.4852	SEL
NiCr20FeMo3TiCuAl	EN
N09925	UNS

Standards	
B805	ASTM
NACE MR0103 / ISO 17945	Others
NACE MR0175 / ISO 15156	
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.

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