

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 aluminium and is designed for high strength and excellent corrosion resistance. The nickel content provides protection against chloride-ion stress corrosion cracking and, in combination with molybdenum and copper, also offers excellent resistance to reducing chemicals. Molybdenum aids resistance to pitting and crevice corrosion. The chromium content of the alloy ensures resistance in oxidising environments.

The alloy exhibits a high degree of corrosion resistance in H₂S and CO₂ environments and is particularly suitable for sour (H₂S-containing) crude oil, natural gas, sulphuric acid, phosphoric acid and seawater. BÖHLER L925 offers high strength and maintains this strength even at high temperatures. BÖHLER L925 meets the requirements of NACE MR0175 and API 6A CRA for acidic applications and can be used for pressure-maintaining and pressure-controlling equipment in corrosive environments. Typical applications include packers, safety valves, pumps, hangers, connectors, fasteners and numerous 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.

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.

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/>