

NI-BASE ALLOYS

Application Segments

Oil & Gas/CPI

Available Product Variants

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

BÖHLER L725 (UNS N07725) is a nickel chromium-molybdenum-niobium alloy that is highly resistant to corrosion and is age hardenable for extremely high strength. It has essentially the same corrosion resistance as alloy 625, which is widely used in a broad range of severely corrosive environments in the oil & gas sector. The strength of age-hardened BÖHLER L725 is of the order of twice that of annealed Alloy 625 and comparable alloy 718.

High levels of nickel and chromium provide corrosion resistance in reducing and oxidizing environments. The substantial molybdenum content enhances resistance to reducing media and provides a high degree of resistance to pitting and crevice corrosion. Additionally, the combination of elements makes the alloy resistant to hydrogen embrittlement and stress corrosion cracking.

The properties of BÖHLER L725 are useful for a range of applications that require outstanding corrosion resistance along with high strength high ductility and toughness. Originally developed for Oil Patch applications such as well head and subsurface completions, it has been used as pressure containing, flow wetted components in subsurface safety valves and other down hole components. BÖHLER L725 is approved under NACE MR0175 for use in sour gas wells.

The alloy is used for hangers, landing nipples, side pocket mandrels and polished bore receptacles in sour gas service, where it resists the effects of hydrogen sulfide, chlorides and carbon dioxide. The alloy is also attractive for Pumps and propeller shafts and for high strength fasteners, Hydraulic couplings in marine applications, where it resists corrosion, pitting and crevice attack in sea water.

Process Melting

VIM + VAR

Applications

- > Comp. for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- > Flowlines & Connectors
- > Other Oil and Gas + CPI comps.
- > Well Logging Tools
- > CPI (incl. LNG, Urea)
- > Oil & Gas / CPI
- > Tubular Products, Flanges, Fittings
- > Wellhead, X-mas trees and Manifolds (incl. Tubing hangers), BOPs
- > Drilling Tools and Components
- > Other Components
- > Well Completion Tools

Technical data

Material designation		Standards	
Alloy 725	Market grade	B637	ASTM
N07725	UNS	B805	
		NACE MR0103 / ISO 17945 NACE MR0175 / ISO 15156 API 6A CRA	Others

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Ti	Al	Nb	Fe
max. 0.030	max. 0.20	max. 0.35	max. 0.015	max. 0.010	19.0 to 22.5	7.00 to 9.50	55.0 to 59.0	1.00 to 1.70	max. 0.35	2.75 to 4.00	REM

Refers to API Standard 6A CRA N07725

Delivery condition

Solution annealed + precipitation hardened

Hardness (HRC)	32 to 43
Tensile Strength (MPa ksi)	min. 1,034 150
Yield Strength (MPa ksi)	827 to 1,034 120 to 150

Round Bars and Wire Rod (if any)

		Diameter			
		mm		inch	
ROLLED					
12.50	-	101.60		0.492	-
					4.000
FORGED					
101.70	-	254.00		4.004	-
					10.000

More information regarding MOQ, lengths and tolerances upon request.

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

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@boehler-edelstahl.at
<https://www.voestalpine.com/boehler-edelstahl/de/>

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ONE STEP AHEAD.