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 an age-hardenable nickel-chromium-molybdenum-niobium alloy with comparable corrosion resistance to Alloy 625. The strength of Bohler L725 in the age-hardened condition is approximately twice that of annealed Alloy 625 and comparable to Alloy 718.
The high nickel and chromium content provides corrosion resistance in reducing and oxidizing environments, while the molybdenum content increases resistance to reducing media and offers high resistance to pitting and crevice corrosion. The combination of elements makes the alloy resistant to hydrogen embrittlement and stress corrosion cracking. BÖHLER L725 is also approved according to NACE MR0175 for use under sour gas conditions.
The alloy was originally developed for oilfield applications such as wellheads and well completions, safety valves and other downhole components where it resists the effects of hydrogen sulfide, chlorides and carbon dioxide. The alloy is also attractive for pumps and propeller shafts as well as for high-strength fasteners and hydraulic couplings in marine applications subject to corrosion, pitting and crevice attack in seawater.

Process Melting

VIM + VAR

Applications

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

Technical data

Material designation	
Alloy 725	Market grade
N07725	UNS

Standards	
B637	ASTM
B805	
NACE MR0103 / ISO 17945	Others
NACE MR0175 / ISO 15156	
API 6A CRA	

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)	min. 1,034
Yield Strength (MPa)	827 to 1,034

Round Bars and Wire Rod (if any)

Diameter mm		
ROLLED		
12.50	-	101.60
FORGED		
101.70	-	254.00

More information regarding MOQ, lengths and tolerances upon request.

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ONE STEP AHEAD.