NI-BASE ALLOYS

Application Segments

Oil & Gas/CPI

Available Product Variants

Long Products* | Semi-Finished Products / Billet | Plates | 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

BÖHLERL718 API (UNS N07718) is a high-strength, corrosion-resistant nickel-chromium-iron-molybdenum material with excellent corrosion resistance, especially in H2S and CO2 environments. The alloy is age-hardenable due to the addition of niobium, titanium and aluminium. BÖHLER L718 API is recognised by the oil industry for its simple and cost-effective production in combination with good tensile, fatigue, creep and fracture strength and is used in a wide range of applications in this sector.
BÖHLER L718 API has excellent weldability and is resistant to cracking after welding. The material can be used at high temperatures.

BÖHLER L718 API is available in the NACE/API 6A CRA versions with a minimum yield strength of 120/140 ksi and also in the high-strength version with 150 ksi. All hardness grades are suitable for sour service and can be used for pressurising and pressure-controlling equipment in corrosive environments. Typical applications include packers, pumps, connectors and fasteners as well as gate valves, throttle spindles, pipework hangers and fire safe valves, but also a wide range of downhole and completion components, nuclear and surface applications.

Process Melting

VIM + VAR

Applications

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

Technical data

Material designation	
Alloy 718API	Market grade
N07718	UNS

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

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	Ti	Al	Nb	B	Fe	Pb	Bi	Ca	Mg	Se
max. 0.045	max. 0.35	max. 0.35	max. 0.010	max. 0.010	17.0 to 21.0	2.80 to 3.30	50.0 to 55.0	max. 0.23	max. 1.00	0.80 to 1.15	0.40 to 0.60	4.87 to 5.20	max. 0.0060	REM	max. 0.0010	max. 0.00005	max. 0.0030	max. 0.0060	max. 0.000

Refers to API Standard 6A CRA N07718 | Nb + Ta 4.87 to 5.20

Delivery condition

Solution annealed + precipitation hardened | 120k	
Hardness (HRC)	32 to 40
Tensile Strength (MPa)	min. 1,034
Yield Strength (MPa)	827 to 1,000

Solution annealed + precipitation hardened | 140k	
Hardness (HRC)	34 to 44
Tensile Strength (MPa)	min. 1,138
Yield Strength (MPa)	965 to 1,034

Solution annealed + precipitation hardened | 150k	
Hardness (HRC)	35 to 45
Tensile Strength (MPa)	min. 1,207
Yield Strength (MPa)	1,034 to 1,207

Round Bars and Wire Rod (if any)

Diameter* mm		
ROLLED		
5.00	-	13.50
12.50	-	101.60
FORGED		
101.70	-	355.60

* Diameter 5.00 - 13.50 mm available as Wire Rod.

Diameter 12.5 - 101.60 mm round bars.

Variant 140k is available in forged products only

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

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/

voestalpine
ONE STEP AHEAD.