NI-BASE ALLOYS

Application Segments

Oil & Gas / CPI

Available Product Variants

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

* Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Product Description

BÖHLER L825 (UNS N08825) is an austenitic nickel-iron-chromium alloy with additions of molybdenum, copper and titanium. It was developed to provide exceptional resistance to numerous corrosive environments, both oxidizing and reducing. The nickel content of BÖHLER L825 makes it resistant to chloride stress-corrosion cracking, and combined with molybdenum and copper, provides substantially improved corrosion resistance in reducing environments when compared to conventional austenitic stainless steels. The chromium and molybdenum content provide resistance to chloride pitting, as well as resistance to a variety of oxidizing atmospheres. The addition of titanium stabilizes the alloy against sensitization in the as-welded condition. This stabilization makes the alloy resistant to intergranular attack after exposure in the temperature range which would typically sensitize un-stabilized stainless steels. The material is resistant to corrosion in a wide variety of process environments including sulfuric, sulfurous, phosphoric, nitric, hydrofluoric and organic acids and alkalis such as sodium or potassium hydroxide, and acidic chloride solutions. The fabrication of BÖHLER L825 is typical of nickel-base alloys, with material readily formable and weldable by a variety of techniques BÖHLER L825 shows good toughness, even under continuous operation, at both room and elevated temperatures, up to approximately 550 °C (1.020 °F) and is suitable for pressure vessels with wall temperatures up to 538 °C (1,000 °F).

Process Melting

Airmelted

Applications

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

Technical data

Material designation	
Alloy 825	Market grade
2.4858	SEL
NiCr21Mo	EN
N08825	UNS

Standards	
B425	ASTM
NACE MR0103 / ISO 17945 NACE MR0175 / ISO 15156	Others

Chemical composition (wt. %)

C	Si	Mn	S	Cr	Mo	Ni	Cu	Ti	Al	Fe
max. 0.05	max. 0.5	max. 1.0	max. 0.03	19.5 to 23.5	2.5 to 3.5	38.0 to 46.0	1.5 to 3.0	0.6 to 1.2	max. 0.2	min. 22.0

Refers to ASTM B 425 UNS N08825

Delivery condition

Solution Annealed + Quenched	
Tensile Strength (MPa)	min. 586
Yield Strength (MPa)	min. 241

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 5.00 - 101.6 mm round bars.

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

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ONE STEP AHEAD.