

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 L022 belongs to the group of highly corrosion-resistant nickel-chromium-molybdenum-tungsten alloys with extremely low carbon and silicon contents. The material is characterised by excellent resistance in oxidising and reducing media, even at elevated temperatures. The alloy offers good resistance to wet media, e.g. sulphuric acid, phosphoric acid, nitric acid, chlorine gas, acid mixtures of sulphuric acid and oxidising acids with chloride ions. Recommended for use in the presence of strong oxidising agents such as iron(III) and copper(II) chlorides, chlorine, formic acid, acetic acid, seawater and other salt solutions. A special feature is the high resistance to crevice, pitting and stress corrosion cracking at elevated temperatures under oxidising and reducing conditions. Due to its good thermal stability, BÖHLER L022 can usually be used in the welded condition without subsequent heat treatment. Application in environmental technology, e.g. agitators, heat exchangers, blowers, linings and pipelines as well as spray systems, in flue gas cleaning systems for waste incineration plants and power stations, e.g. flaps, slide valves and measuring probes. Use in waste water treatment systems, e.g. pipelines, evaporation plants and in chemical engineering for plants for chlorine gas and hydrogen chloride production, e.g. shut-off valves, slide valves, pipelines and centrifuges. Chlorine bleaching plants, e.g. pipelines, measuring systems. Suitable for pressure vessels with wall temperatures from -196°C up to 400°C.

Process Melting

VIM + ESR or Airmelted + ESR

Applications

- Components for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- Components for the recycling industry
- Components for food processing and animal feed
- CPI (incl. LNG, Urea)
- Oil & Gas / CPI
- Other Oil and Gas + CPI components
- Tubular Products, Flanges, Fittings
- Valves and Actuators
- Heat Exchanger
- Paper and Pulp Industry / Printing
- Oil & Gas, CPI & Renewables

Technical data

Material designation		Standards	
Alloy C22	Market grade	B564	ASTM
2.4602	SEL	B574	
NiCr21Mo14W	EN	VdTÜV WB479	Others
N06022	UNS	NACE MR0103 / ISO 17945	
		NACE MR0175 / ISO 15156	

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	V	W	Co	Fe
max. 0.010	max. 0.08	max. 0.5	max. 0.025	max. 0.010	20.0 to 22.5	12.5 to 14.5	REM	max. 0.35	2.5 to 3.5	max. 2.5	2.0 to 6.0

Refers to VdTÜV WB 479

Delivery condition

Solution Annealed + Quenched

Tensile Strength (MPa)	690 to 950
Yield Strength (MPa)	min. 310

Round Bars and Wire Rod (if any)

Diameter*		
mm		
ROLLED		
5.00	-	13.50
5.00	-	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.

Diameter from 5.0 to 13.5 mm available as Wire Rod. More information regarding MOQ, lengths and tolerances upon 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.

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 ONE STEP AHEAD.