

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 L059 (2.4605/N06059) is a nickel-chromium-molybdenum material with particularly low contents of carbon and silicon, which has high mechanical strength and excellent corrosion resistance. The most important properties of BÖHLER L059 are the excellent resistance to a wide range of corrosive media, both under oxidising and reducing conditions, the excellent resistance to chloride-induced pitting and crevice corrosion as well as the insensitivity to stress corrosion cracking and the excellent resistance to mineral acids such as nitric, phosphoric, sulphuric and hydrochloric acid and in particular to sulphuric/hydrochloric acid mixtures.

The alloy is therefore suitable for a wide range of applications in chemistry, petrochemistry, energy and environmental technology, e.g. plant components for processes in organic chemistry with chloride-containing media, especially when using chloride-based catalysts, components in the fine chemicals and pharmaceutical industries, scrubbers, heat exchangers, flaps, fans and agitators for flue gas desulphurisation plants (FGD) in fossil-fuelled power stations and waste incineration plants, SO₂ scrubbers for marine diesel engines, components for seawater and concentrated brines, equipment and components for geothermal and sour gas applications, reactors for acetic acid and acetic anhydride, and hydrofluoric acid and sulphuric acid coolers and pipes in geothermal power plants.

Due to the particularly low carbon and silicon content, the material does not tend to precipitate grain boundaries during welding or hot forming.

Optimum properties in terms of corrosion resistance are achieved in the clean, metallic bright state.

Process Melting

VIM + ESR or Airmelted + ESR

Applications

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

Technical data

Material designation		Standards	
Alloy 59	Market grade	17744	DIN
2.4605	SEL	17752	
NiCr23Mo16Al	EN	B574	ASTM
N06059	UNS	B564	
		NACE MR0175 / ISO 15156	Others

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	Al	Fe
max. 0.010	max. 0.10	max. 0.5	max. 0.015	max. 0.010	22.0 to 24.0	15.0 to 16.5	REM	max. 0.50	max. 0.3	0.1 to 0.4	max. 1.5

Refers to ASTM B574 Alloy N06059

Delivery condition

Solution Annealed + Quenched

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

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 - 101.6 mm round bars.

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.