

# NI-BASE ALLOYS

## Application Segments

Aerospace

## Available Product Variants

Long Products

## Product Description

BÖHLER L303 is a corrosion and heat resistant nickel alloy in the form of bars, forging and forging stock. The alloy's high-temperature strength is derived from its solid solution strengthening elements of molybdenum, cobalt, and chromium, and its age-hardening elements, aluminum and titanium. Its strength and stability ranges are higher than those typically available for Alloy 718.

It is widely used typically for rotating parts, such as compressor and gas turbine blades, disks, hubs, shafts bolts and spacers requiring high strength up to 1500°F (816°C) and oxidation resistance up to 1750°F (954°C) but usage is not limited to such applications.

## Process Melting

VIM + VAR

## Applications

[> Turbine and Engine Parts \(Aerospace\)](#)
[> Aerospace](#)
[> Other Aerospace Components](#)

## Technical data

Material designation		Standards	
Waspaloy	Market grade	B637	ASTM
2.4654	SEL	5704	AMS
NiCr19Co14MoTi	EN	5706	
NiCr20Co13Mo4Ti3Al		5707	
NC20K14			
N07001	UNS		

## Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	Ti	Al	B	Fe	Pb	Bi	Se	Ag
0.02 to 0.10	max. 0.15	max. 0.10	max. 0.015	max. 0.015	18.00 to 21.00	3.50 to 5.00	REM	max. 0.10	12.00 to 15.00	2.75 to 3.25	1.20 to 1.60	0.003 to 0.010	max. 2.00	max. 5 ppm	max. 0.3 ppm	max. 3 ppm	max. 5 ppm

Related to AMS5704

**Delivery condition**

**Solution annealed, stabilized and precipitation hardened**

Hardness (HB)	341 to 401
Tensile Strength (MPa)	min. 1,207
Yield Strength (MPa)	min. 827

**Round Bars and Wire Rod (if any)**

Diameter mm			MOQ ex mill kg	Length m			Tolerance
<b>ROLLED</b>							
15.00	-	55.00	700	3.00	-	4.00	IT h/k 12
<b>FORGED</b>							
101.60	-	203.20	2,200	2.00	-	6.00	IT h/k 12

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.