

# NI-BASE ALLOYS

## Application Segments

|           |            |               |                     |
|-----------|------------|---------------|---------------------|
| Aerospace | Automotive | Oil & Gas/CPI | Land Based Turbines |
|-----------|------------|---------------|---------------------|

## 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

BÖHLER L718AMS is a corrosion and heat resistant nickel alloy - precipitation hardenable - in the form of bars, forging and forging stock. High resistance to creep and stress-rupture up to 1300°F (704°C) and oxidation resistance up to 1800°F (982°C). High duty parts and components for oil & gas and CPI applications, components for automotive, gas turbines, aerospace engines, high-speed airframe parts such as disks, buckets, spacers and high temperature bolts and fasteners.

## Process Melting

|           |
|-----------|
| VIM + VAR |
|-----------|

## Applications

- > Other Aerospace Components
- > Chemical industry - general
- > Components for underground construction (drilling, shafts, etc.)
- > Fasteners, Bolts, Nuts
- > Other Power Generation Components
- > Well Logging Tools
- > Turbine and Engine Parts (Aerospace)
- > Components for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- > CPI (incl. LNG, Urea)
- > Paper and Pulp Industry / Printing
- > Other Oil and Gas + CPI components
- > Wellhead, X-mas trees and Manifolds (incl. Tubing hangers), BOPs
- > Blades & Shafts for Turbines and Compressors
- > Components for Industrial Gas Compressors
- > Drilling tools and components
- > Power Generation (Gas/Steam/ Nuclear)
- > Well Completion Tools
- > Other Automotive Components (Sealing Rings, Sensors, Steering Systems)

## Technical data

| Material designation            |              | Standards |      |
|---------------------------------|--------------|-----------|------|
| Alloy 718                       | Market grade | B637      | ASTM |
| 2.4668                          | SEL          | 5662      | AMS  |
| NiCr19NbMo/<br>NiCr19Fe19Nb5Mo3 | EN           | 5663      |      |
| NC19FCNb                        |              |           |      |
| N07718                          | UNS          |           |      |

Chemical composition (wt. %)

| C         | Si        | Mn        | P          | S          | Cr             | Mo           | Ni             | Cu        | Co        | Ti           | Al           | Nb           | B          | Fe  | Pb        | Bi          | Se        |
|-----------|-----------|-----------|------------|------------|----------------|--------------|----------------|-----------|-----------|--------------|--------------|--------------|------------|-----|-----------|-------------|-----------|
| max. 0.08 | max. 0.35 | max. 0.35 | max. 0.015 | max. 0.015 | 17.00 to 21.00 | 2.80 to 3.30 | 50.00 to 55.00 | max. 0.30 | max. 1.00 | 0.65 to 1.15 | 0.20 to 0.80 | 4.75 to 5.50 | max. 0.006 | REM | max. 5ppm | max. 0.3ppm | max. 3ppm |

Related to AMS5662

Delivery condition

Solution annealed

|               |  |
|---------------|--|
| Hardness (HB) | max. 277   bars and forging stock, max 254 mm diameter |
|---------------|--|

Round Bars and Wire Rod (if any)

| Diameter*<br>mm |   |        | MOQ ex mill<br>kg | Length<br>m |   |      | Tolerance |
|-----------------|---|--------|-------------------|-------------|---|------|-----------|
| <b>ROLLED</b>   |   |        |                   |             |   |      |           |
| 5.00            | - | 13.50  |                   |             | - |      |           |
| 12.50           | - | 55.00  | 600               | 3.00        | - | 4.00 | IT h/k 12 |
| 55.01           | - | 101.60 | 2,550             | 3.00        | - | 4.00 | IT h/k 12 |
| <b>FORGED</b>   |   |        |                   |             |   |      |           |
| 101.61          | - | 254.00 | 2,200             | 2.00        | - | 6.00 | IT h/k 12 |

\* Diameter 5.00 - 13.50 mm available as Wire Rod.  
 Diameter 12.5 - 101.6 mm round bars.  
 More information regarding MOQ and tolerances for Wire Rod products 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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