# OȚELURI REZISTENTE LA COROZIUNE - OȚELURI MARTENSITICE CĂLITE (PH )

## Application Segments

Aviație

## Available Product Variants

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

* Datele prezentate se referă exclusiv la produsele lungi. Vă rugăm să respectați explicațiile detaliate de la sfârșitul fișei tehnice (pdf).

## Product Description

BÖHLER N701 is a high quality, vacuum remelted, corrosion resistant steel for aerospace applications in the form of bars for machining up to 200 mm in diameter.

It is a martensitic, precipitation hardenable chromium-nickel-copper steel with high strength and toughness.

These products are typically used for parts that require corrosion resistance, high strength up to 600 °F, and exhibit good toughness & strength in the transverse direction of large dimensions. However, use is not limited to such applications.

Certain processing methods and operating conditions can cause these products to become susceptible to Stress corrosion cracking.

## Process Melting

Airmelted + VAR

## Applications

- Alte componente aerospațiale
- Inginerie mecanică
- Piese structurale (aerospațiale)
- Elemente de fixare, șuruburi, piulițe
- Components
- Shafts for Mechanical Engineering

## Technical data

| Material designation | |
|---|---|
| 15-5 PH | Market grade |
| 1.4545 | SEL |
| X5CrNiCu15-5<br>FE-PM 1802 | EN |
| S15500 | UNS |

| Standards | |
|---|---|
| 2817 | EN |

BÖHLER

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## Chemical composition (wt. %)

| C | Si | Mn | P | S | Cr | Mo | Ni | Cu | Nb |
|---|---|---|---|---|---|---|---|---|---|
| max. 0.07 | max. 1.00 | max. 1.00 | max. 0.030 | max. 0.015 | 14.0 to 15.5 | max. 0.50 | 3.5 to 5.5 | 2.5 to 4.5 | 5xC to 0.45 |

Related to EN 2817

## Delivery condition

### Soluție recoaptă

| | |
|---|---|
| Hardness (HB) | max. 363 \| Bars for machining |

### Soluție recoaptă + precipitare întărită

| | |
|---|---|
| Hardness (HB) | 331 to 401 \| Bars for machining |
| Tensile Strength (MPa) | min. 1,070 |
| Yield Strength (MPa) | min. 1,000 |

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

| Diameter mm | | | MOQ ex mill kg | Length m | | | Tolerance |
|---|---|---|---|---|---|---|---|
| **ROLLED** | | | | | | | |
| 5.01 | - | 12.49 | 1,100 | 3.00 | - | 4.00 | IT h/k 11 |
| 12.50 | - | 55.00 | 1,200 | 3.00 | - | 4.00 | IT h/k 11 |
| 55.01 | - | 120.00 | 2,300 | 3.00 | - | 4.00 | IT h/k 11 |
| 120.01 | - | 140.00 | 2,300 | 3.00 | - | 5.00 | IT h/k 14 |
| **FORGED** | | | | | | | |
| 140.01 | - | 203.20 | 2,350 | 2.00 | - | 5.00 | IT h/k 14 |
| 203.21 | - | 304.80 | 3,500 | 2.00 | - | 5.00 | IT h/k 14 |

### Flat Bars

| Width mm | | | Thickness mm | | | MOQ ex mill kg | Length m | | | Tolerance |
|---|---|---|---|---|---|---|---|---|---|---|
| **ROLLED** | | | | | | | | | | |
| 15.00 | - | 121.00 | 0.31 | - | 3.39 | 1,300 | 3.00 | - | 4.00 | LN 1017 |
| 120.00 | - | 150.00 | 0.98 | - | 3.35 | 2,550 | 3.00 | - | 4.00 | LN 1017 |
| 150.00 | - | 275.00 | 0.79 | - | 3.94 | 2,550 | 3.00 | - | 4.00 | LN 1017 |
| 275.00 | - | 330.00 | 0.98 | - | 3.15 | 2,550 | 3.00 | - | 4.00 | LN 1017 |

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.