

CORROSION RESISTANT STEELS - MARTENSITIC, SEMI- MARTENSITIC AND FERRITIC STEELS

Application Segments

Engineering

Available Product Variants

Long Products

Product Description

BÖHLER N324 is a heat-treatable, corrosion-resistant steel with 13% Cr, 1.3% Mo and 1.2% Ni. The sulphur content of approx. 0.2% improves machinability. This steel has better corrosion resistance, hardness and toughness than standard steels with 13% Cr. A high surface quality is required to achieve adequate corrosion resistance after hardening and tempering. A polishing and passivation treatment is recommended. Tempering above 427 °C [800 °F] leads to reduced corrosion resistance. Products made from this steel are used for parts in general engineering and non-critical cutting and non-cutting medical applications with a hardness of up to 48/53 HRC that require resistance to wear and corrosion. Typical parts include knives, scissors, drills, screws and blades. Grades with improved machinability should not be used for critical parts of surgical instruments and should only be considered for instrument applications if appropriate measures can be taken during manufacture to minimize the inherent limitations of this alloy class.

Process Melting

Airmelted

Applications

> Luxury Watch Industry

> Surgery

Technical data

| Material designation | | Standards | |
|----------------------|--------------|-----------|------|
| 420F-Mod | Market grade | F899 | ASTM |
| 1.4197 | SEL | | |
| X20CrNiMoS13-1 | EN | | |

Chemical composition (wt. %)

| C | Si | Mn | P | S | Cr | Mo | Ni |
|--------------|-----------|-----------|-----------|--------------|----------------|--------------|--------------|
| 0.20 to 0.26 | max. 1.00 | max. 2.00 | max. 0.04 | 0.15 to 0.27 | 12.50 to 14.00 | 1.10 to 1.50 | 0.75 to 1.50 |

Refers to ASTM F899 - 420F Mod

Delivery condition

Annealed

| | |
|---------------|----------|
| Hardness (HB) | max. 262 |
|---------------|----------|

Round Bars and Wire Rod (if any)

| Diameter* | |
|---------------|-----------|
| mm | |
| ROLLED | |
| 5.00 | - 13.50 |

* Diameter 5.00 - 13.50 mm available as Wire Rod.
More information regarding MOQ 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.

voestalpine BÖHLER Edelstahl GmbH & Co KG

Mariazeller Straße 25
8605 Kapfenberg, AT
T. +43/50304/20-0
E. info@bohler-edelstahl.at
<https://www.voestalpine.com/bohler-edelstahl/de/>