

CREEP RESISTANT STEELS

Application Segments

Aerospace

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 T671SB is a corrosion-resistant steel for aerospace applications in the form of bars, wire, and forgings with diameters/thicknesses up to 305 mm in the solution-annealed condition, as well as pre-forging stock of any size.

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

BÖHLER T671 SB is primarily suitable for parts requiring corrosion resistance close to that of Cr-Ni 18-8 steels, exceeding the strength of martensitic 12% Cr steels, and can be used up to a service temperature of 371 °C. This steel can be processed in the solution-annealed condition and, through precipitation treatment, achieves tensile strengths of up to 1241 MPa with good transverse ductility and transverse strength at large cross-sectional dimensions.

Certain processing methods and operating conditions can cause stress corrosion cracking in these products.

Process Melting

Airmelted + ESR

Applications

- > Aerospace
- > Other Aerospace Components
- > Structural parts (Aerospace)

Technical data

Material designation		Standards	
Custom 450	Market grade	5773	AMS

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Nb
max. 0.05	max. 1.00	max. 1.00	max. 0.020	max. 0.015	14.00 to 16.00	0.50 to 1.00	6.00 to 7.00	1.25 to 1.75	min. 8xC

Related to AMS 5773 type 1

Delivery condition

Solution annealed	
Hardness (HB)	max. 311 bars, hot or cold finished, forgings
Tensile Strength (MPa)	min. 862
Yield Strength (MPa)	min. 655

Solution annealed	
Tensile Strength (MPa)	max. 1,138 for wire products

Round Bars and Wire Rod (if any)

Diameter mm			MOQ ex mill kg	Length m			Tolerance
ROLLED							
12.50	-	55.00	850	3.00	-	4.00	IT h/k 11
55.01	-	120.00	2,650	3.00	-	4.00	IT h/k 11
120.01	-	140.00	2,650	3.00	-	5.00	IT h/k 14
FORGED							
140.01	-	203.20	2,400	2.00	-	5.00	IT h/k 14

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/>