

FERRITIC AND MARTENSITIC STEELS, INCL. PRECIPITATION HARDENING 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 premium aircraft-quality corrosion-resistant steel in the form of bars, wire, forgings up to 12.0 inches (305 mm) in diameter or least distance between parallel sides in the solution heat treated condition and stock of any size for forging.

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

Primarily for parts requiring corrosion resistance approximating that of 18-8 type steels and high strength exceeding that of 12Cr martensitic type steels up to 700 °F (371 °C), but usage is not limited to such applications. This steel can be used in the solution heat treated condition and is capable of being precipitation heat treated to tensile strengths as high as 180 ksi (1241 MPa) with good ductility and strength in the transverse directions in large section sizes.

Certain processing procedures and service conditions may cause these products to become subject to stress-corrosion cracking.

Process Melting

Airmelted + ESR

Applications

> Aerospace
> Other Aerospace Comps.
> Structural parts (Aerosp)

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 ksi)	min. 862 126
Yield Strength (MPa ksi)	min. 655 95

Solution annealed

Tensile Strength (MPa ksi)	max. 1,138 166 for wire products
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Round Bars and Wire Rod (if any)

Diameter		MOQ ex mill		Length		Tolerance
mm	inch	kg	lbs	m	ft	
ROLLED						
12.50	- 55.00	0.492	- 2.165	850	1,874	3.00 - 4.00 9.84 - 13.12 IT h/k 11
55.01	- 120.00	2.166	- 4.724	2,650	5,842	3.00 - 4.00 9.84 - 13.12 IT h/k 11
120.01	- 140.00	4.725	- 5.512	2,650	5,842	3.00 - 5.00 9.84 - 16.40 IT h/k 14
FORGED						
140.01	- 203.20	5.512	- 8.000	2,400	5,291	2.00 - 5.00 6.56 - 16.40 IT h/k 14

Long Products: For additional specifications, technical requirements, and other dimensions, please contact our regional voestalpine BÖHLER sales companies.

Sheet & Plates: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact voestalpine BÖHLER Bleche GmbH & Co KG.

Semi-Finished Products: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact the business unit Semi Finished Products of voestalpine BÖHLER Edelstahl GmbH & Co KG.

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.