

AUSTENITIC STEELS

Available Product Variants

[Long Products](#)
[Round Bar](#)
[Plates](#)

Product Description

BÖHLER Grade A750 is an austenitic, corrosion and heat-resistant chromium nickel steel, niobium stabilized and solution treated. It has been used typically for parts requiring good corrosion resistance and which will be subjected to elevated temperatures during fabrication or in service and for parts requiring oxidation resistance up to 1500 °F (816°C), but usage is not limited to such applications. Compared to common 13% chromium steel, it offers higher corrosion resistance at lower strength and good weldability. No post-weld heat treatment required. The steel is resistant to atmospheric corrosion and the action of steam, water and acid as well as alkaline solutions. For optimum resistance, surfaces should be pickled or polished. Cold forming properties are very good. The steel is capable of taking a mirror finish.

Process Melting

[Airmelted](#)

Applications

> Other Aerospace Comps.

Technical data

Material designation		Standards	
1.4546	SEL	5646	AMS
S34700	UNS	S130	BS
X5CrNiNb18-10 Z6CnNb1810	EN	970 Pt.3	

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	Nb
max. 0.08	max. 1	max. 2	max. 0.04	max. 0.03	17 to 19	max. 0.75	9 to 12	max. 0.75	max. 1	10xC to 1.1

Related to AMS5646

Delivery condition

Solution annealed	
Tensile Strength (MPa ksi)	517 75 bars above 12.7 mm diameter
Yield Strength (MPa ksi)	207 30 bars above 12.7 mm diameter
Solution annealed	
Tensile Strength (MPa ksi)	586 to 862 85 to 126 wire
Solution annealed	
Hardness (HB)	140 to 255 bars up to 50.8 mm diameter, inclusive
Solution annealed	
Hardness (HB)	max. 255 bars above 50.8 mm diameter

Available Dimensions

Round Bars

Diameter		MOQ ex mill		Length		Tolerance								
								mm	inch	kg	lbs	m	ft	
ROLLED														
5.01	-	12.49	0.197	-	0.492	800	1,764	3.00	-	4.00	9.84	-	13.12	IT h/k 11
12.50	-	55.00	0.492	-	2.165	950	2,094	3.00	-	4.00	9.84	-	13.12	IT h/k 11
55.01	-	69.00	2.166	-	2.717	1,200	2,646	3.00	-	4.00	9.84	-	13.12	IT h/k 11
69.01	-	72.00	2.717	-	2.835	1,000	2,205	3.00	-	4.00	9.84	-	13.12	IT h/k 11
72.01	-	82.00	2.835	-	3.228	1,150	2,535	3.00	-	4.00	9.84	-	13.12	IT h/k 11
82.01	-	120.00	3.229	-	4.724	1,300	2,866	3.00	-	4.00	9.84	-	13.12	IT h/k 11
120.01	-	140.00	4.725	-	5.512	1,300	2,866	3.00	-	5.00	9.84	-	16.40	IT h/k 14
FORGED														
140.01	-	220.00	5.512	-	8.661	1,400	3,086	2.00	-	5.00	6.56	-	16.40	IT h/k 14

For more information see <https://www.voestalpine.com/bohler-edelstahl/de/>

For additional specifications and other sizes please contact BÖHLER Edelstahl - Special Materials Aerospace & Land Based Turbine

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ONE STEP AHEAD.