

FERRITIC AND MARTENSITIC STEELS, INCL. PRECIPITATION HARDENING STEELS

Application Segments

Aerospace

Available Product Variants

Long Products

Product Description

BÖHLER N352 is a martensitic chromium steel with nickel addition. Heat treatable grade, capable of taking a mirror finish. Higher corrosion resistance compared to 13% chromium steel. Resistant to the effects of seawater, weak acids and alkaline solutions, as well as to acids having a strong, oxidizing effect such as nitric acid. Surface finish for optimum corrosion resistance: fine ground or polished. For components subject to high mechanical and corrosive stress, e.g. screws and shafts, at operating temperatures up to approx. 752° F.

Process Melting

Airmelted

Applications

> Structural parts (Aerosp)

> Aerospace

> Other Aerospace Comps.

Technical data

Material designation		Standards	
431	Market grade	1.4044	WL
	AISI	AFNOR Z15CN16-02	Others
1.4044	SEL		
X15CrNi17-3	EN		
S43100	UNS		
SUS431	JIS		

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Ni
0.12 to 0.20	max. 1.0	max. 1.0	max. 0.035	max. 0.025	15.0 to 18.0	2.00 to 3.00

Related to WL 1.4044

Delivery condition

Annealed

Hardness (HB)	max. 248 1.4044.2, bars from 6 up to 160 mm diameter
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Hardened and Tempered

Tensile Strength (MPa ksi)	800 to 950 117 to 138 1.4044.5, bars from 6 mm up to 160 mm diameter
Yield Strength (MPa ksi)	min. 600 88

Hardened and Tempered

Tensile Strength (MPa ksi)	900 to 1,100 131 to 160 1.4044.6, bars from 6 mm up to 100 mm diameter
Yield Strength (MPa ksi)	min. 700 102

Round Bars and Wire Rod (if any)

Diameter		MOQ ex mill		Length		Tolerance
mm	inch	kg	lbs	m	ft	
ROLLED						
5.01	- 12.49	0.197	- 0.492	700	1,543	3.00 - 4.00 9.84 - 13.12 IT h/k 11
12.50	- 54.00	0.492	- 2.126	800	1,764	3.00 - 4.00 9.84 - 13.12 IT h/k 11
55.01	- 69.00	2.166	- 2.717	1,100	2,425	3.00 - 4.00 9.84 - 13.12 IT h/k 11
69.01	- 115.00	2.717	- 4.528	950	2,094	3.00 - 4.00 9.84 - 13.12 IT h/k 11

Flat Bars

Width		Thickness		MOQ ex mill		Length		Tolerance
mm	inch	mm	inch	kg	lbs	m	ft	
ROLLED								
15.00	- 121.00	0.591	- 4.764	10.00	- 85.00	0.394	- 3.346	880 1,940 3.00 - 4.00 9.84 - 13.12 LN 1017
120.00	- 150.00	4.724	- 5.906	25.00	- 102.00	0.984	- 4.016	880 1,940 3.00 - 4.00 9.84 - 13.12 LN 1017
150.00	- 175.00	5.906	- 6.890	18.00	- 102.00	0.709	- 4.016	880 1,940 3.00 - 4.00 9.84 - 13.12 LN 1017

For additional specifications and other sizes please contact BÖHLER Edelstahl - Special Materials Aerospace

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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