

CORROSION RESISTANT STEELS - MARTENSITIC, SEMI- MARTENSITIC AND FERRITIC 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 (Aerospace)

> Other Aerospace Components

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

Hardened and Tempered	
Tensile Strength (MPa)	800 to 950 1.4044.5, bars from 6 mm up to 160 mm diameter
Yield Strength (MPa)	min. 600

Hardened and Tempered	
Tensile Strength (MPa)	900 to 1,100 1.4044.6, bars from 6 mm up to 100 mm diameter
Yield Strength (MPa)	min. 700

Round Bars and Wire Rod (if any)

Diameter mm		MOQ ex mill kg		Length m		Tolerance	
ROLLED							
5.01	-	12.49	700	3.00	-	4.00	IT h/k 11
12.50	-	54.00	800	3.00	-	4.00	IT h/k 11
55.01	-	69.00	1,100	3.00	-	4.00	IT h/k 11
69.01	-	115.00	950	3.00	-	4.00	IT h/k 11

Flat Bars

Width mm		Thickness mm		MOQ ex mill kg		Length m		Tolerance		
ROLLED										
15.00	-	121.00	10.00	-	85.00	880	3.00	-	4.00	LN 1017
120.00	-	150.00	25.00	-	102.00	880	3.00	-	4.00	LN 1017
150.00	-	175.00	18.00	-	102.00	880	3.00	-	4.00	LN 1017

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.

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