

CORROSION RESISTANT STEELS - MARTENSITIC, SEMI- MARTENSITIC AND FERRITIC STEELS

Application Segments

Aerospace

Available Product Variants

Long Products*

*) Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Product Description

BÖHLER N352S1 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	S80	BS
X15CrNi17-3	EN		

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	V	W	Cu	Co	Ti	Nb	Fe	Sn
0.12 to 0.20	max. 1.0	max. 1.0	max. 0.030	max. 0.025	15 to 18.0	max. 0.30	2.0 to 3.0	max. 0.20	max. 0.05	max. 0.30	max. 0.05	max. 0.05	max. 0.05	REM	max. 0.02

Related to BS S80

Delivery condition

Annealed

Hardness (HB)	max. 277 Bars up to 63mm diameter
Tensile Strength (MPa)	880 to 1,080
Yield Strength (MPa)	min. 690 S80D, bright bars up to 100mm diameter

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	-	55.00	800	3.00	-	4.00	IT h/k 11
55.01	-	69.00	2,423	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	-	86.00	880	3.00	-	4.00	LN 1017
120.00	-	150.00	25.00	-	102.00	880	3.00	-	4.00	LN 1017
150.00	-	275.00	18.00	-	102.00	880	3.00	-	4.00	LN 1017

* from 880kg (1940lbs) to 1050kg (2315lbs) depending on size

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/>

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ONE STEP AHEAD.