

# FERRITIC AND MARTENSITIC STEELS, INCL. PRECIPITATION HARDENING STEELS

## Application Segments

Aerospace
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## Available Product Variants

Long Products*
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\*) 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
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## Applications

> Structural parts (Aerosp)

> Other Aerospace Comps.

> Aerospace

## 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 0.2	max. 1	max. 1	max. 0.03	max. 0.025	15 to 18	max. 0.3	2 to 3	max. 0.2	max. 0.05	max. 0.3	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   ksi)	880 to 1,080   128 to 157
Yield Strength (MPa   ksi)	min. 690   101   S80D, bright bars up to 100mm diameter

### Round Bars and Wire Rod (if any)

Diameter		MOQ ex mill		Length		Tolerance
mm	inch	kg	lbs	m	ft	
<b>ROLLED</b>						
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	- 55.00	0.492	- 2.165	800	1,764	3.00 - 4.00   9.84 - 13.12   IT h/k 11
55.01	- 69.00	2.166	- 2.717	2,423	5,342	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	
<b>ROLLED</b>								
15.00	- 121.00	0.591	- 4.764	10.00	- 86.00	0.394	- 3.386	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	- 275.00	5.906	- 10.827	18.00	- 102.00	0.709	- 4.016	880   1,940   3.00 - 4.00   9.84 - 13.12   LN 1017

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

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.