

# BEARING STEELS

## Available Product Shapes

[Long Products](#)
[Semi-Finished Products / Billet](#)

## Product Description

This specification covers a premium aircraft-quality, double vacuum-melted low-alloy steel in the form of bars, forgings and forging stock.

It is used typically for parts such as bearings operating under heavy loads and high speeds at moderate temperatures up to 600° F. E.g. bearings and rolling elements, bearing balls and races.

## Process Melting

[VIM + VAR](#)

## Applications

[> Bearings](#)
[> Turbine and Engine Parts \(Aerosp\)](#)
[> Other Aerospace Comps.](#)

Material designation		Standards	
1.3551	SEL	6491	AMS
M50	Market grade		

## Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	V	W	Cu	Co
0.80 - 0.85	≤ 0.25	0.15 - 0.35	≤ 0.015	≤ 0.008	4.00 - 4.25	4.00 - 4.50	≤ 0.15	0.90 - 1.10	≤ 0.25	< 0.10	< 0.25

Related to AMS 6491

## Delivery condition

### Annealed

Hardness	max. 248 HB   Cold finished and annealed, above 12.7 mm diameter
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### Annealed

Hardness	max. 229 HB   Hot finished and annealed, above 12.7 mm diameter
Tensile Strength	max. 825   119.652 N/mm <sup>2</sup>   KSI   Cold finished and annealed, max 12.7 mm diameter

**Available Dimensions**
**Round Bars**

Diameter		MOQ		Length		Tolerance*
mm	inch	kg	lbs	m	ft	
<b>ROLLED</b>						
12.30	- 55.00	0.484	- 2.165	1,250	2,756	3.00 - 4.00 9.84 - 13.12 IT h/k 11
55.01	- 120.00	2.166	- 4.724	1,400	3,086	3.00 - 4.00 9.84 - 13.12 IT h/k 11
120.01	- 140.00	4.725	- 5.512	1,400	3,086	3.00 - 5.00 9.84 - 16.40 IT h/k 14

\* ISO 286

For more information see [www.voestalpine.com/boehler-edelstahl](http://www.voestalpine.com/boehler-edelstahl)

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

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@boehler-edelstahl.at](mailto:info@boehler-edelstahl.at)

[www.voestalpine.com/boehler-edelstahl](http://www.voestalpine.com/boehler-edelstahl)

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ONE STEP AHEAD.