

BEARING STEELS

Application Segments

Aerospace

Available Product Variants

Long Products

Product Description

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

It is used typically for parts requiring through hardening properties, usually with hardness of approximately 60 HRC in section thicknesses 0.50 inch (12.7 mm) and under. E.g. bearing rings and rolling elements, bearing balls and races.

Process Melting

Airmelted + VAR

Applications

[> Bearings](#)
[> Turbine and Engine Parts \(Aerospace\)](#)
[> Other Aerospace Components](#)

Technical data

Material designation		Standards	
52100	Market grade	6444	AMS
1.2067	SEL		
102Cr6	EN		

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al	O
0.93 to 1.05	0.15 to 0.35	0.25 to 0.45	max. 0.015	max. 0.015	1.35 to 1.60	max. 0.10	max. 0.25	max. 0.30	max. 0.050	max. 0.0015

Related to AMS 6444

Delivery condition

Annealed

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

Hardness (HB)	max. 207 Hot finished and annealed, above 12.7 mm diameter
Tensile Strength (MPa)	max. 827 Cold finished and annealed, max 12.7 mm diameter

Round Bars and Wire Rod (if any)

Diameter mm			MOQ ex mill kg	Length m			Tolerance
ROLLED							
12.50	-	55.00	1,100	3.00	-	4.00	IT h/k 11
55.01	-	120.00	1,200	3.00	-	4.00	IT h/k 11
120.01	-	140.00	1,200	3.00	-	5.00	IT h/k 14

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.