

FERRITIC AND MARTENSITIC STEELS, INCL. PRECIPITATION HARDENING STEELS

Application Segments

Aerospace

Available Product Variants

Long Products*

Semi-Finished Products / Billet

Plates

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

Product Description

This specification covers a premium aircraft-quality corrosion-resistant steel in the form of bars, wire, forgings in the solution heat treated condition and stock of any size for forging.

It is a martensitic precipitation hardenable chromium-nickel-molybdenum-aluminium steel possessing high strength and toughness.

These products have been used typically for parts requiring corrosion resistance and a combination of high strength and high toughness up to 800 °F (427 °C) but usage is not limited to such applications.

Certain processing procedures and service conditions may cause these products to become subject to stress-corrosion cracking.

Process Melting

VIM + VAR

Applications

> Aerospace

> Other Aerospace Comps.

> Structural parts (Aerosp)

Technical data

Standards	
5739	AMS

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Ti	Al	N
max. 0.02	max. 0.25	max. 0.25	max. 0.015	max. 0.010	11.00 to 12.50	1.75 to 2.25	9.00 to 10.50	0.2 to 0.5	0.80 to 1.10	max. 0.01

Related to AMS 5739

Delivery condition

Solution annealed

Hardness (HB)	max. 331 bars, hot or cold finished, forgings
Tensile Strength (MPa ksi)	max. 1,103 160 for wire products

Round Bars and Wire Rod (if any)

Diameter		MOQ ex mill		Length		Tolerance
mm	inch	kg	lbs	m	ft	
ROLLED						
12.50	- 55.00	0.492	- 2.165	1,200	2,646	3.00 - 4.00 9.84 - 13.12 IT h/k 11
55.01	- 69.00	2.166	- 2.717	1,200	2,646	3.00 - 4.00 9.84 - 13.12 IT h/k 11

Long Products: For additional specifications, technical requirements, and other dimensions, please contact our regional voestalpine BÖHLER sales companies.

Sheet & Plates: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact voestalpine BÖHLER Bleche GmbH & Co KG.

Semi-Finished Products: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact the business unit Semi Finished Products of voestalpine BÖHLER Edelstahl GmbH & Co KG.

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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ONE STEP AHEAD.