

CORROSION RESISTANT STEELS - MARTENSITIC PRECIPITATION HARDENING (PH) 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 Components

> Structural parts (Aerospace)

Technical data

Standards	
5935	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)	max. 1,103 for wire products

Round Bars and Wire Rod (if any)

Diameter mm			MOQ ex mill kg	Length m			Tolerance
ROLLED							
12.50	-	55.00	1,200	3.00	-	4.00	IT h/k 11
55.01	-	69.00	1,200	3.00	-	4.00	IT h/k 11

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.

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ONE STEP AHEAD.