ENGINEERING STEELS - MARTENSITIC PRECIPITATION HARDENING (MARAGING) STEELS

Application Segments

Aerospace

Available Product Variants

Long Products* | Plates

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

Product Description

BÖHLER V250AMS is a premium aircraft-quality, maraging alloy steel in the form of bars, forgings and stock for forging up through 10 inches (254.00 mm) inclusive in diameter or least distance between parallel sides.

In contrast to heat treatable steels its outstanding tensile properties are not due to a hardened structure with relatively high carbon content, but to precipitation of intermetallic phases from a ductile nickel bearing matrix containing almost no carbon.

These products have been used typically for parts requiring through hardening, without quenching, to a minimum yield strength of 240 ksi (1655 MPa) and where such parts may require welding during fabrication, but usage is not limited to such applications. E.g highly stressed components for the aircraft and rocket industries.

Process Melting

VIM + VAR

Applications

- Structural parts (Aerospace)
- Other Aerospace Components
- Aerospace

Technical data

Material designation	
Maraging 250	Market grade

Standards	
6512	AMS

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	Ti	Al	B	Ca	Zr
max. 0.03	max. 0.10	max. 0.10	max. 0.010	max. 0.010	max. 0.50	4.60 to 5.20	17.00 to 19.00	max. 0.50	7.00 to 8.50	0.30 to 0.50	0.05 to 0.15	max. 0.004	max. 0.05	max. 0.02

Related to AMS 6512

Delivery condition

Solution annealed

Hardness (HRC)	max. 34 | Above 12.7 mm diameter

Solution annealed

Hardness (HRC)	max. 34 | Max 12.7 mm diameter
Tensile Strength (MPa)	max. 1,103 | Max 12.7 mm diameter

Round Bars and Wire Rod (if any)

Diameter mm			MOQ ex mill kg	Length m			Tolerance
ROLLED							
5.01	-	12.49	1,100	3.00	-	4.00	IT h/k 11
12.50	-	55.00	1,300	3.00	-	4.00	IT h/k 11
55.01	-	120.00	2,500	3.00	-	4.00	IT h/k 11
120.01	-	140.00	2,500	3.00	-	5.00	IT h/k 14
FORGED							
140.01	-	203.20	2,200	3.00	-	5.00	IT h/k 14

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ONE STEP AHEAD.