

# HEAT TREATABLE STEELS AND PRECIPITATION HARDENING STEELS

## Application Segments

Aerospace

## Available Product Variants

Long Products

## Product Description

BÖHLER V250 is a premium aircraft-quality, maraging alloy steel in the form of bars, forgings and stock for forging.

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 247 ksi (1700 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 (Aerosp)

> Other Aerospace Comps.

## Technical data

Material designation		Standards	
Maraging 250	Market grade	S162	BS
1.6359	SEL		
X2NiCoMo18-8-5	EN		

## Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Co	Ti	Al	B	Ca	Zr
max. 0.010	max. 0.10	max. 0.10	max. 0.010	max. 0.010	max. 0.25	4.6 to 5.2	17.0 to 19.0	7.0 to 8.5	0.30 to 0.60	0.05 to 0.15	max. 0.005	max. 0.05	max. 0.02

Related to BS S 162

## Delivery condition

### Solution annealed

Hardness (HB) | max. 321 | S162B, Bars forged or rolled

### Round Bars and Wire Rod (if any)

		Diameter				MOQ ex mill		Length				Tolerance		
		mm		inch		kg	lbs	m		ft				
<b>ROLLED</b>														
5.01	-	12.49	0.197	-	0.492	1,100	2,425	3.00	-	4.00	9.84	-	13.12	IT h/k 11
12.50	-	55.00	0.492	-	2.165	1,300	2,866	3.00	-	4.00	9.84	-	13.12	IT h/k 11
55.01	-	120.00	2.166	-	4.724	2,500	5,512	3.00	-	4.00	9.84	-	13.12	IT h/k 11
120.01	-	140.00	4.725	-	5.512	2,500	5,512	3.00	-	5.00	9.84	-	16.40	IT h/k 14
<b>FORGED</b>														
140.01	-	203.20	5.512	-	8.000	2,200	4,850	3.00	-	5.00	9.84	-	16.40	IT h/k 14

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

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