

# 4330M

Smiths Advanced Metals

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## Heat-Treatable Steel Bar

With added Vanadium for improved hardness.

4330M is a chromium-nickel-molybdenum heat treatable steel modified by adding vanadium to improve hardenability. The alloy may be heat-treated to improve strength considerably.

The alloy also offers attractive performance characteristics, including improved notch toughness, greater fatigue strength and good toughness. 4330M alloy also provides resistance to crack propagation and superior impact strength. The material is ideal for the most demanding aerospace engineering applications, including aircraft landing gear, aerostructures, bolts and shafts. The tensile strength after heat treatment is 220 to 240 ksi (1520-1650 N/mm<sup>2</sup>).

4330M has low carbon content making the alloy ideal for shock loading and stress concentrated applications.

Smiths Advanced Metals stocks [4330M steel bars](#) in the normalised and tempered condition. Our steel bars are stocked in closer incremental sizes which often removes the need for extra machining.



### Grades / Specifications

- 34CrNiMo6V
- UNS GK23080
- AMS6411
- AMS6427
- ASTM A646
- BMS7-122
- BMS7-27
- MIL-S-8699

### Benefits

- Good weldability
- Very good impact properties at low temperatures
- Good toughness
- Increased hardness

#### \*Chemical Composition (weight %)

	C	Si	Mn	P	S	Cr	Mo	Ni	V	Cu
min.	0.28	0.15	0.65			0.75	0.35	1.65	0.05	
max.	0.33	0.35	1.00	0.015	0.015	1.00	0.50	2.00	0.10	0.35

\* As per AMS 6411

#### \*Mechanical Properties

Tensile Strength	1,517 MPa min
0.2% Yield	1,276 MPa min
Elongation	10% min
Reduction of Area	35% min

\* Properties as per AMS 6411, response to heat treatment

### Processing Options

We process your steel bars in-house at our bulk central warehouse in Biggleswade. The warehouse processes more than 2 million billets every year. We cut bars to closer tolerances, and with the size of our operation, we offer scale efficiencies which reduces purchase and processing costs for our customers.

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