

### Maraging Steel

#### Typical Applications

- Missile casings
- Tooling
- Ordnance mounting blocks
- High performance motorsport components
- Couplings
- Jet engine and helicopter drive shafts
- Load cells
- Landing gear

#### Product Description

C350 - a maraging alloy steel containing 12.0% cobalt and 4.8% molybdenum. This steel is produced by vacuum arc re-melting and provides a very high strength nominally 350 ksi tensile (2415 MPa) with an above average level of toughness. The alloy retains its strength up to 450°C and good notch impact is maintained down to minus 50°C and below. This material may be nitrided. C350 is usually supplied in the annealed condition where the microstructure consists of fine martensite before final heat treatment.

#### Machining & Welding

Maraging steels are usually machined in the annealed condition, however, they can be machined in the maraged condition. Components can be machined close to finished dimensions as the low temperature maraging treatment results in minimal distortion. In addition, the small contraction of approximately 0.05% due to maraging results in good dimensional stability.

C350 steel has good weldability.

#### Availability

Bar and forgings.

#### Related Specifications

- UNS K93160

#### Chemical Composition (weight %)

	Ni	Co	Mo	Ti	Al	Si	Mn	C	S	P	Zr	B	
Min	18.50	12.00	4.80	1.40	0.10								
Max						0.10	0.10	0.03	0.01	0.01	0.01	0.003	

#### Mechanical Properties (after heat treatment)

Ultimate Tensile Strength	350,000	psi
0.2% Yield Strength	340,000	psi
Elongation	7	%
Reduction of Area	35	%
Notch Tensile (K=9.0)	330,000	psi

### Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

#### UK Service Centres:

Smiths Belfast **02895 908 897**  
 Smiths Biggleswade **01767 604 704**  
 Smiths Birmingham **0121 728 4940**  
 Smiths Bristol **0117 971 2800**  
 Smiths Chelmsford **01245 466 664**  
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#### Quality & Testing:



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