

C250

Technical Datasheet



Service. Quality. Value.

Maraging Steel

Typical Applications

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

Product Description

Type C250 cobalt containing grade of maraging steel, produced by vacuum arc re-melting, provides very high strength (nominally 250 ksi tensile) 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. C250 is usually supplied in the annealed condition where the microstructure consists of fine martensite. This structure is then maraged (precipitation hardened) to achieve final properties employing a relatively low temperature that results in the required combination of high strength and toughness. The alloy has a density of 8.02 g/cc.

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.

C250 steel can be readily welded.

Availability

Bar and forgings.

Related Specifications

- UNS K92890
- AMS 6512
- Wr. N 1.6359
- BS S162

Chemical Composition (weight %)

	C	Si	Mn	Ni	Co	Mo	Al	Ti	Fe
Min				17.00	7.00	4.60	0.05	0.30	Bal
Max	0.3	0.10	0.10	19.00	8.50	5.20	0.15	0.50	

Mechanical Properties (annealed and maraged condition)

UTS, MPa	1,860
0.2% PS, MPa	1,725
Elongation on 4D, %	12
Charpy notch impact, J	20
Young's modulus, GPa	190

Hardness (HRC) in the annealed condition is 34 max. and for the maraged condition 48 min.

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**
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 Smiths Redruth **01209 315 512**
 Smiths Verwood **01202 824 347**
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Quality & Testing:



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