AMS 6346 (4130)

Technical Datasheet

Chromium-Molybdenum Alloy Steel Bar

Service. Quality. Value.

Typical Applications

Intended for use in the manufacture of parts and components with sections ½" thick or less at time of heat treatments which required a through-hardening steel capable of developing hardness as high as Rockwell "C" 35, and also for parts with greater thickness requiring proportionately lower hardness. It may be used for parts requiring fusion welding. Hardenability and weldability are considered equivalent to 8630 (MIL-S-6250).

Product Description

This chromium-molybdenum alloy is one of the most widely used aircraft steels because of its combination of weldability, ease of fabrication and mild hardenability. In relatively thin sections it will respond to heat treatment to high strength levels and yet in the normalised condition it has adequate strength for many applications. When resistance to wear and abrasion is required, it may be nitrided.

This grade is a quality product melted under the best steelmaking practices for aircraft quality steels. It is vacuum degassed to meet the magnetic particle inspection standards of AMS 2301. The density of this material is typically 7.85kg/dm³.

Machinability

70% for annealed and cold drawn condition. Based on 100% for AISI 1212 steel.

Corrosion Resistance

Low resistance to corrosion.

Weldability

Good.

Production Tolerances

Manufacturing limits are as stated in the Table AMS 2251. For further assistance please contact our Sales Dept / Laboratory.

Related Specifications

- SAE 4130
- UNS G41300
- AMS 6348 (Normalised condition)

Cut to Size Sawn blanks

Cut to Length + 1.0mm - NIL

Chemical Composition (weight %)

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Min	0.28	0.40	0.15			0.80		0.15	
Max	0.33	0.60	0.35	0.025	0.025	1.10	0.25	0.25	0.35

Mechanical Properties (minima Heat-Treated Condition)

Tensile Strength (MPa)	862
0.2% Proof Strength (MPa)	689
Elongation on 4D G.L. (%)	17

Bars under 12.70mm hardened and tempered and cold finished.
Bars over 12.70mm hot finished and hardened and tempered or if specified hardened and tempered and cold finished.

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
Smiths Gateshead	0191 469 5428
Smiths Horsham	01403 261 981
Smiths Leeds	0113 307 5167
Smiths Manchester	0161 794 8650
Smiths Norwich	01603 789 878
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Smiths Redruth	01209 315 512
Smiths Verwood	01202 824 347
Main Office	0845 527 3331

Quality & Testing:

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UKAS TESTING 1930

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