

4130 (AMS 6345/ AMS 6346 / AMS 6350)

Chrome-Moly Aircraft Steel

Technical Data Sheet

Alloy 4130 (AISI 4130) is a chromium molybdenum alloy steel being a widely used Aircraft Steel due to its weldability, ease of fabrication and mild hardenability. The hardenability and weldability of Alloy 4130 are considered equivalent to 8630 (MIL-S-6250) . Alloy 4130 is also vacuum degassed to meet the magnetic particle inspection standards of AMS 2301.

Aircraft Quality 4130 per 6345 & 6350 Cold Rolled Sheet

Chromaloy Steel 4130 (E4130) combines Chromium and Molybdenum to maximize strength in this heat-treatable Aircraft Quality AISI 4130 alloy steel. The term Aircraft Quality (or AQ Steel) which is common to all steel at Benedict-Miller means it is suitable for the production of aircraft parts which are subject to magnetic particle inspection after machining.

Specifications

AMS 6345 Sheet / Plate, Normalised
AMS 6346 Bar Hardened & Tempered
AMS 6350 Sheet / Plate
AMS 6351 Sheet / Plate, spheroidised
AMS 6370 Bar
AMS 6371 Tube
MIL-S-6758
MIL-S-18729
MIL-T-67366
AISI 4130

Applications of 4130 Chrome- Moly Aircraft Steel :

Automotive
Military / Commercial Aircraft
Machine Tools
Components
Motorsports
Aerospace
Oil and Gas industry

Chemical Composition Limits									
Weight%	C	Mn	P	S	Si	Cr	Ni	Mo	Cu
4130 Bar/Tube	0.28 - 0.33	0.40-0.60	0.025 max	0.025 max	0.15 - 0.35	0.80-1.10	0.25 max	0.15-0.25	0.35
4130 Sheet/Plate	0.28 - 0.33	0.40 - 0.60	0.025 max	0.025 max	0.20-0.35	0.80-1.10	-	0.15 - 0.25	-

Typical Mechanical Properties						
Alloy	Condition	Thickness	Tensile Strength ksi	Yield Strength ksi	Elongation	Hardness
Tube AMS 6371	Cold Drawn	-	95	70	12	<25
Bar AMS 6370	Annealed	-	-	-	-	29HB Max
Bar AMS 6346	Hardened & Tempered	-	125	100	17	-
Sheet AMS 6350	Annealed	-	-	-	-	<25 HRC
Sheet AMS 6345	Normalised	<0.062"	95	75	8	-
Sheet AMS 6345	Normalised	0.062" - 0.125"	95	75	10	-
Sheet AMS 6345	Normalised	0.125" - 0.187"	95	75	12	-
Sheet AMS 6345	Normalised	0.187" - 0.250"	90	70	15	-
Sheet AMS 6345	Normalised	0.250" - 0.750"	90	70	16	-
Sheet AMS 6345	Normalised	0.750" - 1.500"	90	70	18	-
Sheet AMS 6345	Normalised & Heat Treated	0.249" - 0.375"	-	-	-	42

Sheet AMS 6345	Normalised & Heat Treated	0.375" - 0.500"	-	-	-	38
Sheet AMS 6345	Normalised & Heat Treated	0.500" - 0.625"	-	-	-	32
Sheet AMS 6345	Normalised & Heat Treated	0.625" - 0.750"	-	-	-	29
Sheet AMS 6345	Normalised & Heat Treated	0.750" - 0.875"	-	-	-	27
Sheet AMS 6345	Normalised & Heat Treated	0.875" - 1.500"	-	-	-	26