

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4925

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Revised

TITANIUM ALLOY

4Al - 4Mn

Annealed - 130,000 psi Yield

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Bars, forgings, and forging stock.
3. APPLICATION: Primarily for parts requiring strength up to 750 F and oxidation resistance up to 800 F.
4. COMPOSITION:

Titanium	91.0 min
Manganese	3.0 - 5.0
Aluminum	3.0 - 5.0
Carbon	0.20 max
Other Elements, total	0.80 max

5. CONDITION: Unless otherwise specified, hot finished, with or without subsequent cold reduction, annealed and descaled.
6. TECHNICAL REQUIREMENTS:
 - 6.1 Tensile Properties: Material shall conform to the following requirements, and shall be capable of meeting these requirements after being heated to any temperature up to 1000 F for approximately 30 min. in air and cooled in air. These properties apply when the rate of strain is maintained at approximately 0.005 in. per in. per min. to the yield strength.

6.1.1 Bars:

Tensile Strength, psi	140,000 min
Yield Strength at 0.2% Offset or at 0.0208 in. in 2 in. Extension Under Load (E=15,500,000) psi	130,000 min
Elongation, % in 4D (Sections under 3 in.)	10 min
Reduction of Area, % (Sections under 3 in.)	30 min

6.1.2 Forgings: As agreed upon by purchaser and vendors.

7. QUALITY: Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.
8. TOLERANCES: Unless otherwise specified, diameter or thickness tolerances shall conform to the latest issue of AMS 2241, Table II.

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