AERONAUTICAL
MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

AMS 4121B

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ALUMINUM ALLOY BARS, ROLLED
4.5Cu - 0.9Si - 0.8Mn - 0.5Mg (2014-T6)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

Ø2. FORM: Bars, rods, and wire.

3. APPLICATION: Primarily for parts requiring high strength and whose fabrication does not involve welding or forming.

4. COMPOSITION:

Copper	3.9 - 5.0
Silicon	0.50 - 1.2
Manganese	0.40 - 1.2
Magnesium	0.20 - 0.8
Iron	1.0 max
Zinc	0.25 max
Titanium	0.15 max
Chromium	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

5. CONDITION: Rolled or cold finished, and solution and precipitation heat
Ø treated, unless otherwise specified.

6. TECHNICAL REQUIREMENTS:

6.1 Tensile Properties:

Tensile Strength, psi	65,000 min
Yield Strength at 0.2% Offset or at 0.0145 in. in 2 in. Extension Under Load (E = 10,500,000), psi	55,000 min
Elongation, % in 4D	8 min

6.1.1 When a dispute occurs between purchaser and vendor over the yield strength
Ø value, yield strength determined by the offset method shall apply.

6.1.2 Tensile properties shall be as agreed upon by purchaser and vendor on
Ø material under 0.125 in., on rounds over 6.750 in. in diameter, on squares over 4.000 in., and on rectangles with a thickness over 4.000 in. or a maximum area over 36 sq inches.

6.2 Hardness: Material should have hardness not lower than Brinell 125 using 500 kg load and 10 mm ball or 1000 kg load and 9/16 in. ball, or not lower than Brinell 130 using 1000 kg load and 10 mm ball, but shall not be rejected on the basis of hardness if the tensile property requirements are met.

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