SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York, N.Y. 10017

AEROSPACE MATERIAL SPECIFICATIONS

AMS 4116B

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ALUMINUM ALLOY BARS, ROLLED, DRAWN, OR COLD FINISHED
1.0Mg - 0.60Si - 0.30Cu - 0.20Cr (6061-T4)

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

2. FORM: Bars, rods, and wire.

3. APPLICATION: Primarily for parts where moderate ductility, formability, and response to precipitation heat treatment are required.

4. COMPOSITION:

	min	max
Magnesium	0.8	1.2
Silicon	0.40	0.8
Copper	0.15	0.40
Chromium	0.04	0.35
Iron	--	0.7
Zinc	--	0.25
Manganese	--	0.15
Titanium	--	0.15
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

5. CONDITION: Rolled, drawn, or cold finished, as ordered, and solution heat treated.

6. TECHNICAL REQUIREMENTS: The product shall conform to the following requirements; tensile properties shall be determined in accordance with the latest issue of AMS 2355.

6.1 Tensile Properties: Except as specified in 6.1.2 and 6.1.3, the following requirements apply to all sizes of bars, rods, and wire:

Tensile Strength, psi	30,000 min
Yield Strength at 0.2% Offset or at 0.0072 in. in 2 in. Extension Under Load (E = 9,900,000), psi	16,000 min
Elongation, % in 2 in. or 4D	18 min

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

6.1.2 Yield strength and elongation requirements do not apply to material under 0.125 inch.

6.1.3 Tensile properties shall be as agreed upon by purchaser and vendor on rounds over 8.0 in. in diameter and on squares, rectangles, hexagons, and octagons, having a cross sectional area over 50 sq inches.

6.2 Hardness: Shall be Brinell 50 - 80 using 500 kg load and 100 mm ball or 1000 kg load and 9/16 in. ball or Brinell 55 - 85 using 1000 kg load and 10 mm ball, but the product shall not be rejected on the basis of hardness if the tensile property requirements are met.

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