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

AMS 4112

Issued 2-15-65
Revised

ALUMINUM ALLOY BARS, ROLLED, DRAWN, OR COLD FINISHED
4.5Cu - 1.5Mg - 0.60Mn (2024-T6)

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

2. FORM: Bars, rods, and wire.

3. APPLICATION: Primarily for parts requiring higher yield strength than is afforded by the common tempers of this alloy, and whose fabrication does not involve welding. Certain design and processing procedures may cause this material to be susceptible to stress corrosion cracking; ARP 823 recommends practices to minimize such conditions.

4. COMPOSITION:

	min	max
Copper	3.8	4.9
Magnesium	1.2	1.8
Manganese	0.30	0.9
Iron	--	0.50
Silicon	--	0.50
Zinc	--	0.25
Chromium	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

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

6. TECHNICAL REQUIREMENTS:

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

Tensile Strength, psi	62,000 min
Yield Strength at 0.2% Offset or at 0.0135 in. in 2 in. Extension Under Load (E = 10,500,000), psi	50,000 min
Elongation, % in 2 in. or 4D	5 min

6.1.1 When a dispute occurs between purchaser and vendor over the yield strength value, 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 6.500 in. in diameter; on squares, hexagons, and octagons over 4.000 in.; and on rectangles with a thickness over 4.000 in. or an area over 36 sq inches.

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