

AERONAUTICAL MATERIAL SPECIFICATIONS

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

AMS 4150c

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ALUMINUM ALLOY EXTRUSIONS 1Mg - 0.6Si - 0.25Cu - 0.25Cr (6061-T6)

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 shapes.

3. COMPOSITION:

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

4. CONDITION: Solution and precipitation heat treated.

4.1 Unless otherwise specified, extrusions shall be supplied with the as-extruded surface finish; light polishing to remove minor surface imperfections is permissible provided such imperfections can be removed within the dimensional tolerances.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

Tensile Strength, psi	38,000 min
Yield Strength at 0.2% Offset or at 0.0111 in. in 2 in. Extension Under Load ($E = 9,900,000$), psi	35,000 min
Elongation, % in 2 in. or 4D	10 min

5.1.1 For material of such thickness that a standard specimen cannot be taken, or for material thinner than 0.062 in., the test for elongation is not required.

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

5.2 Hardness: Material should have hardness not lower than Brinell 80 using 500 kg load and 10 mm ball or 1000 kg load and 9/16 in. ball, or not lower than Brinell 84 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.