



AEROSPACE MATERIAL SPECIFICATIONS

AMS 4150D

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

485 Lexington Ave., New York, N. Y. 10017

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ALUMINUM ALLOY EXTRUSIONS 1.0Mg - 0.60Si - 0.30Cu - 0.20Cr (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, wire, shapes, and tubing.
- 3. APPLICATION:** Primarily for parts requiring moderate strength, especially where such parts and assemblies require brazing or welding during fabrication.
- 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:** Solution and precipitation heat treated.
 - 5.1 Unless otherwise specified, extrusions shall be supplied with an as-extruded surface finish; light polishing to remove minor surface imperfections is permissible provided such imperfections can be removed within the dimensional tolerances.
- 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:**

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

 - 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.
 - 6.2 **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 85 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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