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

AEROSPACE MATERIAL SPECIFICATIONS

AMS 4160A

Issued 1-15-60
Revised 3-15-66

ALUMINUM ALLOY EXTRUSIONS
1.0Mg - 0.60Si - 0.30Cu - 0.20Cr (6061-0)

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

Ø 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
Ø Zinc	--	0.25
Manganese	--	0.15
Titanium	--	0.15
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

5. CONDITION: Annealed.

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 Ø properties shall be determined in accordance with the latest issue of AMS 2355.

6.1 Tensile Properties:

Tensile Strength, psi	22,000 max
Yield Strength at 0.2% Offset or at 0.0072 in. in 2 in. Extension Under Load (E = 9,900,000), psi	16,000 max
Elongation, % in 2 in. or 4D	16 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 higher than Brinell 40 using 500 kg load and 10 mm ball or 1000 kg load and 9/16 in. ball, or not higher than Brinell 45 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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