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

AMS 4155A

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ALUMINUM ALLOY EXTRUSIONS
1.0Mg - 0.60Si - 0.25Cu - 0.09Cr (6062-T6)

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. COMPOSITION:

	min	max
Magnesium	0.8	1.2
Silicon	0.40	0.8
Copper	0.15	0.40
Chromium	0.04	0.14
Iron	--	0.7
Zinc	--	0.25
Manganese	--	0.15
Titanium	--	0.15
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

4. CONDITION: Solution and precipitation heat treated.

4.1 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.

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

5.1.2 Specimens from sections over 1.5 in. in diameter or thickness shall be taken midway between center and surface.

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

5.2 Hardness: Material should have hardness not lower than Brinell 80 using 500 kg load Ø 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.

6. QUALITY: Material shall be uniform in quality and condition, clean, sound, smooth, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.

7. TOLERANCES: Unless otherwise specified, tolerances shall conform to all applicable requirements of the latest issue of AMS 2205.

8. REPORTS:

8.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report stating that the product conforms to the chemical composition and technical requirements of this specification. This report shall include the purchase order number, material specification number, size or section identification number, and quantity.

8.2 Unless otherwise specified, the vendor of finished or semi-finished parts shall furnish with each shipment three copies of a report showing the purchase order number, material specification number, contractor or other direct supplier of material, part number, and quantity. When material for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of material to determine conformance to the requirements of this specification, and shall include in the report a statement that the material conforms, or shall include copies of laboratory reports showing the results of tests to determine conformance.

9. IDENTIFICATION: Unless otherwise specified, the product shall be identified as follows:

9.1 Each straight bar, rod, and tube 0.500 in. and over in diameter or distance between parallel sides and each straight shape with configuration allowing access to a flat surface at least 1/2 in. wide recessed not more than 1 in. below the outline of the shape Ø shall be marked with the alloy number and temper, or AMS 4155, and manufacturer's identification. The characters shall be such size as to be clearly legible, shall be applied recurring at intervals not greater than 3 ft using a suitable marking fluid, and shall be sufficiently stable to withstand normal handling.