AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4152 F

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ALUMINUM ALLOY EXTRUSIONS
4.5Cu - 1.5Mg - 0.6Mn (2024-T4)

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. APPLICATION: Primarily for parts requiring good strength and whose fabrication does not involve welding.

4. COMPOSITION:

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

5. CONDITION: Solution heat treated.

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

6. TECHNICAL REQUIREMENTS:

6.1 Tensile Properties:

Nominal Diameter or Least Thickness or Area, Inches	Tensile Strength, psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 10,500,000)		Elongation % in 4D
		psi, min	Extension Under Load in. in 2 in.	
0.050 to 0.249, incl, all areas	57,000	42,000	0.0120	12
Over 0.249 to 0.749, incl, all areas	60,000	44,000	0.0124	12
Over 0.749 to 1.499, incl, all areas	65,000	46,000	0.0128	10
Over 1.499:				
Area 25 sq in. and under	70,000	52,000	0.0139	10
Area over 25 to 32 sq in., incl	68,000	48,000	0.0131	8