

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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ALUMINUM ALLOY EXTRUSIONS 0.65Mg - 0.4Si (63S-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. APPLICATION: Primarily for hinges, trim strips, window frames, sills, and moldings where good surface finish is required. Also may be used to advantage for hollow, partially enclosed, and intricate shapes for which an alloy having good extruding characteristics is required.

4. COMPOSITION:

Magnesium	0.45 - 0.85
Silicon	0.20 - 0.6
Iron	0.35 max
Chromium	0.10 max
Manganese	0.10 max
Titanium	0.10 max
Copper	0.10 max
Zinc	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

5. CONDITION: Solution and precipitation heat treated.

- 5.1 Unless otherwise specified, extrusions shall be supplied with an as-extruded surface finish.

6. TECHNICAL REQUIREMENTS:

6.1 Tensile Properties:

Nominal Diameter or Least Thickness Inch	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 9,900,000)			Elongation % in 4D, min
		Extension Under Load			
		psi, min	in. in 2 in.		
Under 0.125	32,000	25,000	0.0091	8	
Over 0.125 - 0.50, incl	32,000	25,000	0.0091	10	

- 6.1.1 The tensile property requirements shall be based on the thickness of the portion of the extrusion from which the tensile test specimens are taken.
- 6.1.2 If sizes other than those shown above are ordered, tensile property requirements shall be as agreed upon by purchaser and vendor.

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