

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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Revised

ALUMINUM ALLOY EXTRUSIONS 0.65Mg - 0.40Si (63S-T6)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number 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 - 0.60
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:

- 5.1 Solution and precipitation heat treated.
- 5.2 Unless otherwise specified, extrusions shall be supplied with an as-extruded surface finish.

6. TECHNICAL REQUIREMENTS:

6.1 Physical Properties:

Nominal Diameter or Least Thickness Inch	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at extension indicated psi, min	Extension Under Load inch in 2 in.	Elongation % in 4D min
Under 0.125	32,000	25,000	0.0090	8
0.125 to 0.50, incl	32,000	25,000	0.0090	10

- 6.1.1 The physical property requirements shall be based on the thickness of the portion of the extrusion from which the tensile test specimens are taken.