

AERONAUTICAL MATERIAL SPECIFICATION

AMS4156

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 | | Elongation % in 4D min |
|--|---------------------------------|--|---------------------------------------|------------------------------|
| | | psi, min | Extension Under Load inch in 2 in. | |
| 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.

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