

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4150 B

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ALUMINUM ALLOY EXTRUSIONS 1Mg - 0.6Si - 0.25Cu - 0.25Cr (61S-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. COMPOSITION:

Magnesium	0.8 - 1.2
Silicon	0.40 - 0.8
Copper	0.15 - 0.40
Chromium	0.15 - 0.35
Iron	0.7 max
Zinc	0.20 max
Manganese	0.15 max
Titanium	0.15 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

4. CONDITION: Solution and precipitation heat treated.

4.1 Unless otherwise specified, extrusions shall be supplied with the as extruded surface finish.

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 4D	10 min

5.2 Hardness: Material should have hardness not lower than Rockwell B 50, 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, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.

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

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