AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4150

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Revised

ALUMINUM ALLOY
Magnesium Silicon Copper (61ST)
Extruded

1. ACKNOWLEDGMENT: A vendor must mention this specification number in all quotations and when acknowledging purchase orders.

2. FORM: Rods, bars, or shapes.

3. COMPOSITION:

Magnesium	0.8 - 1.2
Silicon	0.4 - 0.8
Copper	0.15 - 0.40
Iron	0.70 max
Chromium	0.35 max
Manganese	0.15 max
Titanium	0.15 max
Zinc	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

4. CONDITION: (a) Heat treated (quenched and aged), unless otherwise specified, conforming to the following minimum physical properties:

Tensile Strength, lb per sq in.	38,000
Yield Strength (0.2% Offset) lb per sq in.	35,000
Equivalent Extension Under Load, inch in 2 in.	0.0108
Elongation, % in 2 in.	10

(b) The material shall have a minimum hardness of Rockwell B50 but shall not be rejected on the basis of hardness if it conforms to the minimum tensile requirements.

5. QUALITY: The material shall be uniform in quality and temper, free from blisters, fins, seams, cracks, segregation, and other defects which adversely affect its strength, use, or machinability. It is subject to coarse etching, and any other tests necessary to insure high quality. If material defects are revealed during fabrication, the material is subject to rejection.

6. TOLERANCES: The following variations in diameter or thickness are permissible:

(a) Rods and bars.-

Diameter or least thickness Inches	Tolerance Inches, plus or minus
Up to 0.500 incl.	0.007
0.501 to 1.000 incl.	0.010
1.001 to 2.000 incl.	0.012
2.001 to 3.000 incl.	0.015
3.001 and over	Same as for extruded shapes