AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4153

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ALUMINUM ALLOY BARS (EXTRUDED)
Copper Silicon Manganese Magnesium (14S-T)

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

2. FORM: Bars, rods, and shapes.

3. COMPOSITION:

Copper	3.90 - 5.00
Silicon	0.50 - 1.20
Manganese	0.40 - 1.20
Magnesium	0.20 - 0.75
Iron	1.00 max
Zinc	0.25 max
Titanium	0.15 max
Chromium	0.10 max
Other impurities, each	0.05 max
Other impurities, total	0.15 max
Aluminum	remainder

4. CONDITION: (a) Solution and precipitation heat treated conforming to the following minimum physical properties:

Diameter or Least Thickness or Area, Inches	Tensile Strength, psi	Yield Strength at 0.2% Offset or at Extension Indicated, psi	Extension Under Load, Inch in 2 in.	Elongation, % in 4D
0.125 to 0.499, incl	60,000	53,000	0.0140	7
0.500 to 0.749, incl	64,000	58,000	0.0149	7
0.750 to 25 sq. in. incl	68,000	60,000	0.0153	7
Over 25 sq. in. to 32 sq. in. incl	68,000	58,000	0.0149	6

Note: The physical properties shall be based on the thickness of the portion of the extrusion from which the test specimens are taken and the physical properties of such specimens shall be in accordance with the values shown above.

(b) If sizes other than those shown under (a) are ordered, physical properties shall be as agreed between vendor and purchaser.

(c) Extrusions shall have a hardness of not less than Brinell 125, using 500 kg load and 10 mm ball or the equivalent, or not less than Brinell 130, using 1000 kg load and 10 mm ball, but shall not be rejected on the basis of hardness if they conform to the minimum tensile requirements.

(d) Unless otherwise specified, all extrusions shall be supplied with the extruded surface finish.