AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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ALUMINUM ALLOY
Extruded
Zinc Magnesium Copper (75S-T)

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

2. FORM: Rods, bars or shapes.

3. COMPOSITION:

Zinc	5.10 - 6.10
Magnesium	2.10 - 2.90
Copper	1.20 - 2.00
Chromium	0.15 - 0.40
Manganese	0.10 - 0.30
Iron	0.70 max
Silicon	0.50 max
Titanium	0.20 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:

Tensile Strength, psi	78,000
Yield Strength (0.2% Offset), psi	70,000
Equivalent Extension Under Load, inch in 2 in.	0.0175
Elongation, % in 2 in.	6

Note: Material having a thickness greater than 0.250 inch shall have a minimum tensile strength of 80,000 psi.

(b) The physical properties specified apply to sizes up to 4 inches in least thickness having a maximum cross-sectional area of 20 square inches. If other sizes are ordered, physical properties shall be as agreed between vendor and purchaser.

(c) The material shall have hardness of not less than Brinell 135, using 500 kg load and 10 mm ball or the equivalent, but shall not be rejected on the basis of hardness if it conforms to the minimum tensile requirements.

5. QUALITY: (a) The material shall be uniform in quality and condition, clean, smooth and free from foreign material and from internal and external defects which adversely affects its strength, use or machinability. Material revealing defects during fabrication shall be subject to rejection.

(b) Material and parts made therefrom shall be subject to inspection by any method which will reveal defects.

6. TOLERANCES: Unless otherwise specified, commercial tolerances for the product ordered shall apply.