AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS4122

Issued 10-1-45
Revised

ALUMINUM ALLOY
Rolled
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	77,000
Yield Strength (0.2% Offset), psi	66,000
Equivalent Extension Under Load, inch in 2 in.	0.0167
Elongation, % in 2 in.	6

(b) The physical properties specified apply to rounds and squares from 0.125 to 3.000 inches, to hexagons from 0.125 to 2.000 inches, to octagons from 0.125 to 1.188 inches, and to rectangles 0.375 x 0.375 to 3.000 x 10.000 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.

(d) Unless otherwise agreed, rounds, squares, hexagons and octagons 1.5 inches and under in diameter or distance between parallel faces and rectangles up to 3 inches wide having a nominal cross-sectional area not greater than 3 square inches shall be supplied cold finished.

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 affect 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.