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AERONAUTICAL MATERIAL SPECIFICATION

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

AMS
4082

ALUMINUM ALLOY TUBING
Magnesium Silicon Chromium

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

2. COMPOSITION:

Magnesium	0.8 - 1.2
Silicon	0.4 - 0.8
Chromium	0.35 max
Copper	0.15 - 0.40
Iron	0.7 max
Manganese	0.15 max
Titanium	0.15 max
Other Impurities, each	0.03 max
Other Impurities, total	0.10 max
Aluminum	remainder

3. CONDITION: Unless otherwise specified, the material shall be supplied in the fully heat treated condition(quenched and aged) conforming to the following minimum physical properties:

Ultimate Tensile Strength, lb per sq in	42,000
Yield Strength, lb per sq in	35,000
Elongation, % in 2 in	8
Rockwell Hardness	B 50

Material which conforms to the minimum tensile requirements shall not be rejected on the basis of Rockwell hardness.

4. QUALITY: The material shall be uniform in quality and temper, clean and smooth, free from seams, laminations, blisters and other defects. Material revealing defects during fabrication is subject to rejection.

5. TOLERANCE: (a)The diameter of the tubing at any section shall not vary from the nominal diameter by more than the following tolerances; all dimensions being in inches:

Nominal Diameter	Tolerance, plus or minus: Mean Diameter Measurement	Tolerance, plus or minus: Individual Diameter Measurement
3/8 to 1/2, incl.	0.003	0.006
Over 1/2 to 1 , "	0.004	0.008
Over 1 to 2 , "	0.005	0.010
Over 2 to 3 , "	0.006	0.012
Over 3 to 5 , "	0.008	0.016
Over 5 to 6 , "	0.010	0.020
Over 6 to 8 , "	0.015	0.030
Over 8 to 10 , "	0.020	0.040

Note:- The tolerance of individual measurements shall not apply to tubes in which the wall thickness is less than 2.5 per cent of the diameter or less than 0.020 in. Such thin wall tubes shall be commercially round.