AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4088

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Revised

ALUMINUM ALLOY TUBING

Copper, Magnesium 1.5, Manganese (24S-T)

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

2. COMPOSITION:

Copper	3.8 - 4.9
Magnesium	1.2 - 1.8
Manganese	0.3 - 0.9
Iron	0.5 max
Silicon	0.5 max
Chromium	0.25 max
Zinc	0.03 max
Other Impurities, each	0.03 max
Other Impurities, total	0.10 max
Aluminum	remainder

3. CONDITION: Heat treated conforming to the following physical properties: the yield strength may be taken at 0.2% set or at the extension under load as tabulated below.

Diameter (Inch)	Wall Thickness (Inch)	Tensile Strength Lbs. per sq. in. min	Yield Strength At 0.2% Set Lbs. per sq. in. min	Extension Under Load In. per in.	Elongation % in 2 in. min
1/4 to 2	0.025 - 0.049	62,000	42,000	0.0062	12
	0.050 - 0.259	62,000	42,000	0.0062	14
	0.260 - 0.500	62,000	42,000	0.0062	16
Greater than 2 to 8	0.025 - 0.049	62,000	42,000	0.0062	10
	0.050 - 0.259	62,000	42,000	0.0062	11
	0.260 - 0.500	62,000	42,000	0.0062	12

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

5. TOLERANCE: (a) Diameter: 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
1/4 to 1/2, incl.	0.003	0.006
Over 1/2 to 1, incl.	0.004	0.008
" 1 to 2, "	0.005	0.010
" 2 to 3, "	0.006	0.012
" 3 to 5, "	0.008	0.016
" 5 to 6, "	0.010	0.020
" 6 to 8, "	0.015	0.030
" 8 to 10, "	0.020	0.040