AEROSPACE MATERIAL SPECIFICATION

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

AMS 4088 D

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ALUMINUM ALLOY TUBING
4.5Cu - 1.5Mg - 0.6Mn (2024-T3)

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

2. APPLICATION: Parts and assemblies such as brackets where high strength, non-weldable material is required.

3. COMPOSITION:

	Copper	3.8 - 4.9
	Magnesium	1.2 - 1.8
	Manganese	0.30 - 0.9
	Iron	0.50 max
ø	Silicon	0.50 max
	Zinc	0.25 max
	Chromium	0.10 max
	Other Impurties, each	0.05 max
	Other Impurties, total	0.15 max
	Aluminum	remainder

4. CONDITION: Solution heat treated.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

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Nominal OD Inches	Nominal Wall Thickness Inch	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 10,500,000) psi, min	Extension Under Load in. in 2 in.	Elongation % in 2 in. min
0.250 to 2, incl	0.025 and under	64,000	42,000	0.0120	10
	Over 0.025 to 0.050, incl	64,000	42,000	0.0120	12
	Over 0.050 to 0.259, incl	64,000	42,000	0.0120	14
	Over 0.259	64,000	42,000	0.0120	16
Over 2 to 8, incl	0.260 and under	64,000	42,000	0.0120	10
	Over 0.260	64,000	42,000	0.0120	12

5.2 Flattening: Tubing having nominal wall thickness less than 10% of the nominal OD shall be capable of withstanding, without cracking, flattening sideways under a load applied gradually at room temperature until the outside dimension under load is equal to 8 times the nominal wall thickness.