

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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New York City

AMS4032A

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ALUMINUM ALLOY SHEET AND STRIP Copper Manganese Magnesium (17S-T)

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

2. <u>COMPOSITION</u> :	Copper	3.5 - 4.5
	Manganese	0.4 - 1.0
	Magnesium	0.2 - 0.8
	Iron	1.0 max
	Silicon	0.8 max
	Chromium	0.25 max
	Zinc	0.10 max
	Other Impurities, each	0.05 max
	Other Impurities, total	0.15 max
	Aluminum	remainder

3. CONDITION: (a) Heat treated conforming to the following minimum physical properties when test specimens are cut in any direction:

Thickness inches	Tensile Strength lb per sq in.	Yield Strength at 0.2% Set or at Extension Indicated		Elongation % in 2 in.	Bend Factor
		lb per sq in.	Extension Under Load inch in 2"		
0.010 - 0.020	58,000	34,000	0.0106	15	3
0.021 - 0.040	58,000	34,000	0.0106	18	3
0.041 - 0.128	58,000	34,000	0.0106	18	4
0.129 - 0.258	58,000	34,000	0.0106	15	6
0.259 - 0.500	58,000	34,000	0.0106	12	8
0.501 - 1.000	58,000	34,000	0.0106	10	-

(b) The material shall not crack when cold bent 180° over a diameter equal to the bend factor times the thickness, the axis of the bend being parallel to the direction of rolling.

4. QUALITY: The material shall be uniform in quality and temper, commercially flat, clean, sound, smooth, and free from buckles, seams, cracks, laminations, blisters, and other injurious defects within the limits of best commercial manufacturing practices. Material revealing defects during fabrication is subject to rejection.