

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS4037 A

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ALUMINUM ALLOY SHEET AND STRIP Copper Magnesium Manganese (24S-T)

1. ACKNOWLEDGMENT: A vendor must mention this specification number and its revision letter 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	0.10 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	62,000	40,000	0.0118	12	4
0.021 - 0.040	62,000	40,000	0.0118	15	4
0.041 - 0.051	62,000	40,000	0.0118	15	5
0.052 - 0.128	62,000	40,000	0.0118	17	6
0.129 - 0.250	62,000	40,000	0.0118	15	8
0.251 - 0.500	62,000	40,000	0.0118	12	10
0.501 - 1.000	62,000	40,000	0.0118	8	--

(b) The material shall not crack when cold bent 180° over a diameter equal to the thickness times the above bend factor, 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.