AERONAUTICAL MATERIAL SPECIFICATION

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

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

2. COMPOSITION: (a) The material shall consist of an aluminum alloy of the following composition, coated on both sides with pure aluminum of approximately the same thickness. The total thickness of the aluminum layers shall be approximately 10% of the total thickness of the inner aluminum alloy layer.

Copper	3.8 - 4.9
Magnesium	1.2 - 1.8
Manganese	0.30 - 0.90
Iron	0.50 max
Silicon	0.50 max
Chromium	0.25 max
Zinc	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

(b) When the analysis is made on a sample milled from the material representative of the entire cross section of the sheet, the percentage of the various elements as determined by analysis, except aluminum, shall be increased 11%, and these figures shall be taken as the composition of the base metal.

3. CONDITION: (a) Heat treated conforming to the following minimum physical properties when test specimens are cut across the direction of rolling, except from strips less than 9 inches wide which may be cut lengthwise:

Thickness inches	Tensile Strength lb per sq in.	Yield Strength at 0.2% Set or at Extension Indicated lb per sq in.	Extension Under Load inch in 2"	Elongation % in 2 in.	Bend Factor
0.010 - 0.020	56,000	37,000	0.0112	13	4
0.021 - 0.040	56,000	37,000	0.0112	16	4
0.041 - 0.128	56,000	37,000	0.0112	16	5
0.129 - 0.250	56,000	37,000	0.0112	13	8
0.251 - 0.500	56,000	37,000	0.0112	11	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.