

# AERONAUTICAL MATERIAL SPECIFICATION

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

## AMS4037B

Issued 6-14-40

Revised 4-1-46

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

1. **ACKNOWLEDGMENT:** A vendor shall 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	0.50 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

3. **CONDITION:** (a) Solution heat treated, conforming to the following physical properties: Test specimens shall conform to ASTM E-8, except from sheet less than 3/4 inch wide, and shall be cut across the direction of rolling except from sheet less than 9 inches wide. Elongation requirements apply only to sheet 3/4 inch and over in width.

Thickness Inches	Tensile Strength		Yield Strength (0.2% Offset) or at Extension Indicated				Elongation		Bend Factor	
	psi min		psi min		inch in 2 in. min		% in 2 in min		Flat Coiled	
	Flat	Coiled	Flat	Coiled	Flat	Coiled	Flat	Coiled	Flat	Coiled
0.012 - 0.020	64,000	62,000	42,000	40,000	0.0119	0.0116	10	12	4	4
0.021 - 0.040	64,000	62,000	42,000	40,000	0.0119	0.0116	13	15	4	4
0.041 - 0.051	64,000	62,000	42,000	40,000	0.0119	0.0116	13	15	5	5
0.052 - 0.064	64,000	62,000	42,000	40,000	0.0119	0.0116	15	17	6	6
0.065 - 0.128	64,000	-	42,000	-	0.0119	-	15	-	6	-
0.129 - 0.249	64,000	-	42,000	-	0.0119	-	14	-	8	-
0.250 - 0.500	62,000	-	40,000	-	0.0116	-	12	-	10	-
0.501 - 1.000	62,000	-	40,000	-	0.0116	-	8	-	-	-
1.001 - 1.500	60,000	-	40,000	-	0.0116	-	7	-	-	-
1.501 - 2.000	60,000	-	40,000	-	0.0116	-	6	-	-	-

(b) Sheet or plate up to and including 0.500 inch thick shall withstand, without cracking, bending at room temperature through an angle of 180° around a diameter equal to the bend factor shown above times the nominal thickness of the sheet or plate, with axis of bend parallel to direction of rolling.

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