

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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ALUMINUM ALLOY SHEET AND STRIP Magnesium Chromium (52S-1/4H)

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> :	Magnesium	2.2 - 2.8
	Chromium	0.15 - 0.35
	Iron plus Silicon	0.45 max
	Manganese	0.10 max
	Copper	0.10 max
	Zinc	0.10 max
	Other Impurities, each	0.05 max
	Other Impurities, total	0.15 max
	Aluminum	remainder

3. CONDITION: (a) Quarter-hard conforming to the following minimum physical properties when test specimens are cut parallel to the direction of rolling:

Thickness inches	Tensile Strength lb per sq in.	Elongation, % in 2 in.		Bend Factor
		Sheet	Strip	
0.017 - 0.019	31,000	5	4	0
0.020 - 0.050	31,000	6	5	1
0.051 - 0.102	31,000	8	7	2
0.103 - 0.113	31,000	8		2
0.114 - 0.249	31,000	10		3

(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.