

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS 4057

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

Issued 1-15-60
Revised

ALUMINUM ALLOY SHEET 4.5Mg - 0.65Mn - 0.15Cr (5083-H32)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily for parts requiring moderate forming, and where welding and good resistance to corrosion is important. Excessive cold work or prolonged heating in the temperature range of 150 - 300 F may cause susceptibility to stress corrosion.
3. COMPOSITION:

Magnesium	4.0 - 4.9
Manganese	0.30 - 1.0
Chromium	0.05 - 0.25
Iron	0.40 max
Silicon	0.40 max
Zinc	0.25 max
Titanium	0.15 max
Copper	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

4. CONDITION: Quarter-hard and, unless otherwise specified, mill finish.

5. TECHNICAL REQUIREMENTS:

- 5.1 Tensile Properties: Test specimens shall conform to ASTM E8-57T except from sheet less than 3/4 in. wide and shall be cut parallel to the direction of rolling. Elongation requirements apply only to sheet 3/4 in. and over in width.

Nominal Thickness Inch	Tensile Strength psi	Yield Strength at 0.2% Offset or at Extension Indicated (E=10,200,000)		Elongation % in 2 in. min
		psi, min	Extension Under Load in. in 2 in.	
0.050 to 0.125, incl	45,000 - 52,000	34,000	0.0107	8
Over 0.125 to 0.249, incl	45,000 - 52,000	34,000	0.0107	10

- 5.1.1 When a dispute occurs between purchaser and vendor over the yield strength value, yield strength determined by the offset method shall apply.
- 5.1.2 If sizes other than those shown are ordered, tensile property requirements shall be as agreed upon by purchaser and vendor.