

SUPERSEDED



400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

**AEROSPACE
MATERIAL
SPECIFICATION**

AMS 4099

Issued 3-15-66
Revised 7-1-81

ALUMINUM ALLOY SHEET AND PLATE
4.5Cu - 1.5Mg - 0.60Mn (2024-T36)
Width Over 60 Inches

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 3-25-74. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the original issue of the subject specification.

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of 7-1-81. By this action, subject specification number and title will be deleted from the active specification index of Aerospace Material Specifications.

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AEROSPACE MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

485 Lexington Ave., New York, N Y. 10017

AMS 4099

Issued 3-15-66

Revised

ALUMINUM ALLOY SHEET AND PLATE

4.5Cu - 1.5Mg - 0.60Mn (2024-T36)

Width Over 60 Inches

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **FORM:** Sheet and plate, produced in widths over 60 inches.
3. **APPLICATION:** Primarily for structural parts of good strength. This material, when re-heat treated by the user, may not have the tensile properties shown. Certain design and processing procedures may cause this material to be susceptible to stress corrosion cracking; ARP 823 recommends practices to minimize such conditions.

4. **COMPOSITION:**

	min	max
Copper	3.8	4.9
Magnesium	1.2	1.8
Manganese	0.30	0.9
Iron	--	0.50
Silicon	--	0.50
Zinc	--	0.25
Chromium	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

5. **CONDITION:** Solution heat treated and cold reduced approximately 6% in thickness.
6. **TECHNICAL REQUIREMENTS:** The product shall conform to the following requirements; tensile properties shall be determined in accordance with the latest issue of AMS 2355.

6.1 **Tensile Properties:**

Nominal Thickness Inch	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 10,500,000)		Elongation % in 2 in. or 4D, min
		psi, min	Extension Under Load in. in 2 in.	
0.063 to 0.249, incl	67,000	50,000	0.0135	8
Over 0.249 to 0.500, excl	66,000	49,000	0.0133	9
0.500	66,000	49,000	0.0133	10

- 6.1.1 When a dispute occurs between purchaser and vendor over the yield strength values, yield strength determined by the offset method shall apply.
- 6.2 **Bending:** Material 0.249 in. and under in thickness shall be capable of withstanding, without cracking, bending through an angle of 180 deg around a diameter equal to 8 times the nominal thickness of the material with the axis of bend parallel to direction of rolling.

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