



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.

TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

AMS 4193

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Revised

ALUMINUM ALLOY SHEET AND PLATE 4.4Cu - 1.5Mg - 0.60Mn (2024-T861)

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.

2. **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.

3. **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	

4. **CONDITION:** Solution heat treated, cold reduced approximately 6% in thickness, and precipitation heat treated.

5. **TECHNICAL REQUIREMENTS:** The product shall conform to the following requirements; tensile properties shall be determined in accordance with the latest issue of AMS 2355.

5.1 **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	in. in 2 in.	
0.020 to 0.062, incl	70,000	62,000	0.0158	3
Over 0.062 to 0.249, incl	71,000	66,000	0.0166	4
Over 0.249 to 0.500, incl	70,000	64,000	0.0162	4

5.1.1 When a dispute occurs between purchaser and vendor over the yield strength values, yield strength determined by the offset method shall apply.

6. **QUALITY:** Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.

7. **TOLERANCES:** Unless otherwise specified, tolerances shall conform to all applicable requirements of the latest issue of AMS 2202.

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