



Society of Automotive Engineers, Inc.  
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 1000

# AEROSPACE MATERIAL SPECIFICATION

AMS 4182B

Superseding AMS 4182A

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## ALUMINUM ALLOY WIRE 5.0Mg - 0.12Mn - 0.12Cr (5056-0)

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for manufacture of screen for reinforcement of, and to provide electrical conductivity through, rubber gaskets.
3. **COMPOSITION:**

	min	max
Magnesium	4.5	5.6
Manganese	0.05	0.20
Chromium	0.05	0.20
Iron	--	0.40
Silicon	--	0.30
Copper	--	0.10
Zinc	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

4. **CONDITION:** Annealed, unless otherwise specified.
  - 4.1 When screen is furnished, wire in one direction may be in a condition other than annealed.
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, Annealed:**

Tensile Strength, psi	46,000 max
Ø Elongation for diameters, 0.125 to 0.375 in., excl, % in 2 in. or 4D	20 min
  - 5.2 **Bending:** Wire shall withstand, without cracking, bending at room temperature flat on itself.
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 2201.
8. **REPORTS:**
  - 8.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report stating that the product conforms to the chemical composition and technical requirements of this specification. This report shall include the purchase order number, material specification number and its revision letter, size, and quantity.

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