

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4182

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Revised

ALUMINUM ALLOY WIRE 5Mg - 0.12Mn - 0.12Cr (56S-0)

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number 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:**

Magnesium	4.50 - 5.60
Manganese	0.05 - 0.20
Chromium	0.05 - 0.20
Iron	0.40 max
Silicon	0.30 max
Copper	0.10 max
Zinc	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

4. **CONDITION:**

4.1 Annealed, unless otherwise specified.

4.2 When screen is furnished, wire in one direction may be in a condition other than annealed.

5. **TECHNICAL REQUIREMENTS:**

5.1 **Physical Properties (Annealed Wire):**

Tensile Strength, psi	46,000 max
Elongation for diameters,	
Less than 0.125 in., % in 10 in.	10 min
0.125 in. - 0.374 in., incl, % in 4D	20 min

5.2 **Bending:** Wire shall withstand, without cracking, bending at room temperature flat on itself.

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