

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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ALUMINUM ALLOY WIRE

5Mg - 0.12Mn - 0.12Cr (56S-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:

Magnesium	4.5 - 5.6
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: 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:

- 5.1 Tensile Properties, Annealed Wire:

Tensile Strength, psi	46,000 max
Elongation for diameters,	
0.125 in. and under, % in 10 in.	10 min
Over 0.125 - 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: Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.
7. TOLERANCES: Unless otherwise specified, tolerances shall conform to the following:

Nominal Diameter Inch	Tolerance, Inch plus and minus
Under 0.036	0.0005
0.036 - 0.064, incl	0.001
Over 0.064 - 0.374, incl	0.0015

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