AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4070C

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ALUMINUM ALLOY TUBING (SEAMLESS)
Magnesium Chromium (52S-0)

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

2. COMPOSITION:

Magnesium	2.20 - 2.80
Chromium	0.15 - 0.35
Iron plus Silicon	0.45 max
Manganese	0.10 max
Copper	0.10 max
Zinc	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

3. CONDITION: (a) Annealed, unless otherwise specified, conforming to the following maximum physical properties:

Tensile Strength, psi	35,000
Yield Strength (0.2% Offset), psi	20,000
Equivalent Extension Under Load, inch in 2 in.	0.0079

(b) The tubing shall be capable of being flattened sidewise under a gradually applied load, without cracking, to an outside dimension three times the wall thickness.

(c) When specified, the tubing shall be capable of being flared sufficiently for use in standard compression type fittings, using shop equipment and practices.

(d) Unless otherwise specified, the manufacturer shall apply an air pressure of 250 psi to the inside of each tube 1-1/2 inches or less in diameter, for a period of not less than 5 seconds, while the tube is immersed in water or other suitable liquid. The pressure test may be applied to the tube after reduction to size but before the final anneal. Any tube which leaks, as indicated by the formation of air bubbles in the liquid, shall be rejected.

4. QUALITY: (a) Tubing shall be uniform in quality and condition, sound and free from foreign material and from internal and external defects detrimental to fabrication or to the performance of parts in service. Tubing revealing defects during fabrication shall be subject to rejection.

(b) Tubing and parts made therefrom shall be subject to inspection by any method which will reveal defects.