

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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STEEL TUBING (SEAMLESS) Low Carbon (Annealed)

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

2. COMPOSITION:

Individual Tube
Check Analysis
Over or Under

Carbon	0.05 - 0.15	0.01
Manganese	0.30 - 0.50	0.03
Phosphorus	0.040 max	0.008
Sulphur	0.050 max	0.008

3. CONDITION: (a) Normalized or annealed conforming to the following minimum elongation:

Nominal Outside Diameter inches	Elongation % in 2 in.	
	Full Tube	Strip
0.50 and less	32	--
Over 0.50 to 5.5 incl.	35	25

(b) Samples representing the ends of each tube shall be capable of being expanded on a hardened and polished, tapered steel pin having a 60° included angle until the large end diameter has increased by the following minimum percentages:

Nominal Wall Thickness	Diameter Increase on O.D.
7% of the OD and less	35%
Over 7% of the OD	45%

The expanded ends shall be inspected and any tube revealing defects or cracks shall be rejected.

(c) When specified, each tube shall be flared by the mill to reveal defects on the inside diameter.

4. QUALITY: (a) This tubing must be aircraft quality, uniform in temper and must not reveal defects during the fabrication processes.