AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4665

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Revised

COPPER SILICON BRONZE
Seamless Tubing

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

2. COMPOSITION:

Silicon	2.75 - 3.50
Manganese or Zinc	1.50 max
Iron	0.25 max
Lead	0.05 max
Total Other Impurities	0.50 max
Copper	remainder

3. CONDITION: (a) Soft annealed, unless otherwise ordered, conforming to the following minimum physical properties:

Tensile Strength, lb. per sq. in.	50,000
Elongation, % in 2 in.	35

(b) The tubing shall withstand being flattened sidewise until the walls contact each other, without showing cracks or other defects.

(c) The tubing shall be capable of being expanded on a hardened and polished, tapered steel pin having a 60° included angle, to a diameter 20% greater than the original, without cracking.

(d) Unless otherwise specified, the tubing shall withstand a hydrostatic pressure that will develop a stress of 10,000 lb. per sq. in., without cracking, bulging, or giving indications of flaws, leaks, or other defects, but in no case is it necessary that the hydrostatic pressure exceed 3,000 lb. per sq. in.

4. QUALITY: (a) The tubing shall be uniform in quality and temper in accordance with best commercial practice.

(b) The tubing shall be seamless, round, and of proper dimensions. External and internal surfaces shall be clean, smooth, free from cracks, seams, slivers, scale, and other injurious defects, and shall not reveal defects during fabrication.

5. TOLERANCE: (a) The following variations in mean diameter are permissible; all dimensions are in inches:

Outside Diameter	Tolerance, plus or minus
Up to 5/8, incl.	0.0025
Over 5/8 to 1, "	0.003
Over 1 to 2, "	0.004
Over 2 to 3, "	0.005
Over 3 to 4, "	0.006

(b) The following variations in wall thickness for the outside diameter ranges indicated are permissible; all dimensions are in inches: