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AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

SAE AMS 4665A

Issued 9-1-41
Revised 4-1-86

SILICON BRONZE TUBING, SEAMLESS
96Cu - 3.2Si
Annealed

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 10-8-84. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the "A" revision of the subject specification.

This specification is under the jurisdiction of AMS Committee "D".

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REAFFIRMED 10/91

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 4665 A

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96Cu - 3.2Si
Annealed

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 hydraulic pressure lines.

3. COMPOSITION:

Silicon	2.8 - 3.5
Manganese or Zinc	1.5 max
Iron	0.25 max
Lead	0.05 max
Copper + Total Named Elements	99.5 min

4. CONDITION: Soft annealed.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

Tensile Strength, psi	50,000 min
Elongation, % in 2 in.	35 min

5.2 Flattening: Tubing shall be capable of being flattened flat under a gradually applied load, without cracking.

5.3 Flarability: Tubing shall be capable of being flared without formation of cracks or other visible defects. Specimens for flaring may be cut from any portion of the tube, or an entire tube may be used as a specimen. The end of the specimen to be flared shall be cut square, with the cut end smooth and free from burrs, but not rounded. The specimen shall, at room temperature, be forced axially with steady pressure over a hardened and polished tapered steel pin having a 74 degree included angle, to produce a flare having a permanent expanded OD not less than 1.2 times the original nominal OD.

5.4 Hydraulic Strength: Tubing shall show no bulges, leaks, or other defects when subjected to internal hydrostatic pressure P determined from the formula $P = \frac{2ST}{D}$ where:

P = Hydrostatic test pressure in psi
S = 10,000 psi
T = Nominal tube wall thickness in inches
D = Nominal outside diameter of the tube in inches

Note: If calculated value of P is greater than 3000 psi, actual test pressure need not be over 3000 psi.