

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 4625A

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PHOSPHOR BRONZE Rods and Bars (Hard)

1. **ACKNOWLEDGMENT:** A vendor must mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Rods, Bars, tubes, or shapes.
3. **COMPOSITION:**

Tin	✓	3.8 - 5.8
Phosphorous	✓	0.03 - 0.35
Zinc	✓	0.30 max
Iron	✓	0.10 max
Lead	✓	0.05 max
Copper Tin Phosphorous		99.5 min
4. **CONDITION:** (a) Hard temper conforming to the following minimum physical properties:

<u>Diameter or Thickness</u> inches	<u>Tensile Strength</u> lb. per sq. in.	<u>Yield Strength</u> lb. per sq. in.	<u>Elongation</u> Per Cent
Rounds:			
0.50 and less	80,000	60,000	12
Over 0.50 to 1, incl.	60,000	40,000	20
Over 1 to 3, "	55,000	30,000	25
Over 3	50,000	25,000	25
Tubes:			
Over 1	55,000	30,000	12

(b) If smaller tubes, or shapes, are ordered to this specification, the physical properties must be specified.

(c) Test specimens from rods and bars over 1.5 inches in diameter or thickness shall be taken half-way between the center and the surface.
5. **QUALITY:** The material shall be uniform in color, quality and temper, clean, sound, smooth, commercially straight, and free from foreign material and all internal and external defects which adversely affect its strength, use, or machinability. If material defects are revealed while machining the parts, the material is subject to rejection.
6. **TOLERANCE:** Commercial tolerances for the product ordered shall apply.
7. **REPORTS:** Unless otherwise specified, the manufacturer shall supply three copies of a notarized report of the physical properties and the chemical composition representing each lot. This report shall include the purchase order number, material specification number, size, and quantity.
8. **IDENTIFICATION:** The material shall be identified by painting each length on or near the ends with the standard color or combination of colors adopted for it, or as agreed upon by the manufacturer and the purchaser.