

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 4630 A

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ALUMINUM BRONZE

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, forgings, or as ordered.

3. COMPOSITION:

Copper	87.0 - 92.0
Aluminum	7.0 - 10.0
Iron	1.5 max
Other additions including nickel, tin and manganese	2.0 max
Total Other Impurities	0.25 max

4. CONDITION: (a) Rods and bars shall be supplied hot rolled, drawn, or extruded, but may be cold finished, conforming to the following minimum physical properties:

Diameter or Thickness inches	Tensile Strength lb. per sq. in.	Yield Strength lb. per sq. in.	Elongation per cent
0.5 and less	80,000	40,000	15
Over 0.5 to 1.0, incl.	75,000	37,500	15
Over 1.0	72,000	33,000	15

(b) All material, including forgings, shall have a minimum Brinell hardness of 130 on the surface except on rounds, where a flat, as necessary for Brinell accuracy, shall be made.

(c) A test specimen shall withstand, without cracking, total immersion for 15 minutes in an aqueous mercurous nitrate solution containing 100 gm of mercurous nitrate and 13 ml of nitric acid (sp gr 1.42) per liter of solution.

5. QUALITY: The material shall be uniform in quality and temper, clean, sound, smooth, 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 furnish three copies of a notarized report of physical properties and the chemical composition representing each lot. This report shall include the purchase order number, material specification number, size, and quantity. If parts are supplied, the part number shall also be included.

8. REJECTIONS: Material not conforming to this specification, or modifications specified on the drawing or the purchase order, is subject to rejection. If samples for verification are desired by the vendor, they must be claimed within three weeks. Rejected material or parts will be held a reasonable length of time, at vendor's risk, awaiting shipping instructions for the return of same for credit or replacement as specified. Vendor shall pay all transportation charges.