

# AERONAUTICAL MATERIAL SPECIFICATION

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

## AMS 4842A

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### LEADED BRONZE CASTINGS 80Cu - 10Sn - 10Pb

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 bearings.

3. COMPOSITION:

Copper	77.0 - 81.0
Tin	9.0 - 11.0
Lead	8.0 - 11.0
Zinc	0.75 max
Nickel	0.50 max
Antimony	0.20 max
Iron	0.15 max
Phosphorus	0.05 max
Aluminum	0.005 max
Total Other Elements	0.35 max

4. CONDITION: As cast.

5. TECHNICAL REQUIREMENTS:

5.1 Casting: A melt shall be the metal withdrawn from a batch furnace charge of 2000 pounds or less as melted for pouring castings.

5.2 Hardness:

5.2.1 Sand Castings: Shall have hardness not lower than Rockwell F 65 or equivalent.

5.2.2 Chill and Centrifugal Castings: Shall have hardness not lower than Rockwell F 75 or equivalent.

5.3 Fracture Test: When castings are broken for fracture test, the fracture shall have uniform color and be substantially free from oxides, blowholes, porosity and other defects. Castings shall be sufficiently ductile to show some bending before rupture.

5.4 Structure: The surface and fracture of a representative casting shall show uniform color and uniform distribution of lead in the copper-tin matrix.