AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 4842

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Revised

BUSHINGS - COPPER LEAD TIN
Castings

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

2. COMPOSITION:

Copper	77.0 - 81.0
Tin	9.0 - 11.0
Lead	8.0 - 11.0
Zinc	0.75 max
Phosphorous	0.05 max
Antimony	0.20 max
Nickel	0.50 max
Iron	0.15 max
Aluminum	none
Total Other Impurities	0.35 max

3. HARDNESS: (a) Parts made from chilled and centrifugal castings shall have a minimum Rockwell hardness of F 75.

(b) Parts made from sand castings shall have a minimum Rockwell hardness of F 65.

4. QUALITY: (a) Castings must be homogeneous and free from shrinkage defects, cracks, blowholes, sand holes, hard spots, foreign matter and other injurious defects, and must not reveal defects when machining. The castings shall be smooth and well cleaned.

(b) The surface and fracture of representative castings must show uniform color and distribution of the lead in the copper-tin matrix and must be substantially free from oxides and other defects.

(c) Castings shall be ductile enough to show a definite amount of bending before rupture when being broken for the fracture test.

(d) The finished bushing shall be a high grade product, free from nicks, burrs, sharp corners and other defects which adversely affect the serviceability of the part.

5. PRECAUTIONS: (a) Castings shall not be repaired by plugging, welding, or other methods, without written permission.

(b) Castings shall be of sufficient size to allow for finishing to blueprint requirements, but excessive size or weight will not be permitted. Excess metal to allow for chucking during machining must not be used.

(c) Unless otherwise specified, parts must be made from individual castings, except those which are made from centrifugal castings. Oversize sprues and risers, which decrease the cooling rate of the casting, shall not be used.