

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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SEALING RINGS, CAST BRONZE 80Cu - 19Sn

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 oil seal rings.
3. COMPOSITION:

Copper	78.0 - 82.0	] — 99.0 min
Tin	18.0 - 19.5	
4. CONDITION: As cast.
5. TECHNICAL REQUIREMENTS:
 - 5.1 Hardness: Finished rings shall have hardness of Rockwell B 85-92 or equivalent.
 - 5.2 Fracture Test: When rings are broken for fracture test, the fracture shall have uniform color and be substantially free from oxides, blowholes and other defects. Rings shall be sufficiently ductile to show some bending before rupture.
 - 5.3 Finish: Rings shall be finished all over. Periphery shall be turned smooth, inside diameter shall be turned smooth or ground, and sides shall be ground or lapped, unless otherwise specified on drawing. Markings resulting from hammering or rolling operations will be permissible.
 - 5.4 Squareness of Periphery: The periphery shall be square with the sides within 0.0005 in.
 - 5.5 Light-Tightness of Periphery: When finished ring is placed in a circular gage whose inside diameter is equal to nominal outside diameter of ring plus or minus 0.0005 in., the periphery of ring shall be light-tight at all points.
 - 5.6 Thickness: Wall thickness of rings shall be within the limits specified on the drawing, but shall vary not more than 0.004 in. throughout the circumference of any one ring.
6. QUALITY: Finished rings shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external defects detrimental to their performance.

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