

# AERONAUTICAL MATERIAL SPECIFICATION

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### BEARINGS 80 Copper 10 Lead 10 Tin Steel Backed Castings

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Bearings shall consist of a steel back lined on one or both sides with a bearing metal.
3. **COMPOSITION:** (a) Bearing Metal.-

Copper	77.00	-	81.00
Tin	9.00	-	11.00
Lead	8.00	-	11.00
Zinc	0.75	max	
Phosphorus	0.05	max	
Antimony	0.20	max	
Nickel	0.50	max	
Iron	0.35	max	
Aluminum	None		
Total Named Elements	99.65	min	

(b) Steel Back.- Unless otherwise specified, shall be low carbon steel having hardness not greater than Rockwell 15N75 (C30).

4. **SAMPLING:** Samples of bearing metal for chemical analysis shall be taken from the surface of the bearing to depth not exceeding one-half the thickness of the bearing metal.
5. **QUALITY:** (a) Bearing metal shall be cast from the best grades of metals and shall be of uniform quality and condition, and shall be free from surface and internal defects detrimental to performance of parts. The metal shall be free from excessive or injurious lead segregation.  
(b) Steel back shall be of uniform quality and condition and free from surface and internal defects detrimental to performance of parts.  
(c) Bearing metal shall be firmly and continuously bonded to the steel.  
(d) Bearings shall be subject to inspection by any method which will reveal defects.  
(e) Acceptance standards for black light inspection, radiographic inspection, etc. shall be as agreed between vendor and purchaser.