

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
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## AMS 4825

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Revised

### BEARINGS - COPPER LEAD TIN Steel Back

1. ACKNOWLEDGMENT: A vendor must mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: This bearing shall consist of a steel back, lined on one or both sides with a bearing metal having the following composition:
3. COMPOSITION:

(a) Bearing Metal:	Copper	70.0 - 78.0
	Lead	13.0 - 18.0
	Tin	9.0 - 11.0
	Iron	0.35 max
	Zinc	0.30 max
	Phosphorous	0.01 max
	Total Other Impurities	0.20 max

(b) Steel Backing: Shall be low carbon and of corresponding hardness to permit machining after bearing metal has been cast on it, unless composition and hardness are otherwise specified on the drawing.
4. SAMPLING: The sample for chemical analysis shall be taken between the bearing surface and a point half way through the bearing material.
5. QUALITY:

(a) Bearing metal shall be cast from the best grades of metals and shall be uniform in quality, free from oxides, non-metallics, shrinkage, lead segregations, cracks, or other injurious defects under visual examination of finished surfaces. The lead shall appear as a fine uniform dispersion when examined under a microscope at a magnification of 50 diameters.

(b) The steel back shall be free from laps, cracks, seams, or other injurious defects.

(c) Bearing metal shall be well bonded to the steel.
6. REPORTS: Unless otherwise specified, the manufacturer shall supply three copies of a notarized report of the chemical composition representing the bearing metal. This report shall include the purchase order number, material specification number, part numbers, and quantity of each part.
7. IDENTIFICATION: Each finished part shall be identified by the manufacturer's trade mark, or letters as allocated, which shall be etched with acid or an electric pencil at a point designated on the drawing, if a definite location is desired.
8. CORROSION: The manufacturer shall coat all bearings with a corrosion preventive compound to protect all surfaces from corrosion during shipment or storage. The compound shall be easily removed by gasoline.
9. APPROVAL: A manufacturer shall not begin to supply parts to this specification until samples have been approved by the purchaser, and after approval the composition and method of manufacture shall not be changed without his permission.