AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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INSERTS, THREAD FORM, PHOSPHOR BRONZE
95Cu - 5Sn

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

2. TYPE: Closely wound wire helices, the insides of which, after assembly, provide threads of diameter and pitch specified on drawing.

3. APPLICATION: Primarily to provide moderately hard, wear resistant, interchangeable threads in metals and nonmetals, and for salvaging worn or damaged threads.

4. COMPOSITION:

Copper	93.0 min	
Tin	3.5 - 5.8	99.5 min
Phosphorus	0.03 - 0.35	
Zinc	0.30 max	
Iron	0.10 max	
Lead	0.05 max	

5. FABRICATION: Inserts shall be coiled from cold drawn and shaped wire.

6. TECHNICAL REQUIREMENTS:

6.1 Tensile Strength: Shaped wire before coiling into inserts shall have tensile strength not lower than 110,000 psi.

6.2 Bending: Wire shall withstand, without cracking, bending at room temperature through an angle of 120 degrees around a diameter equal to twice the cross sectional dimension of the wire in the plane of bend.

6.3 Spacing: Any insert shall be capable of stretching with approximately equal spacing between coils when extended axially beyond its elastic limit.

7. QUALITY:

7.1 Inserts shall be uniform in quality and condition, clean, sound, smooth, and free from foreign materials and from internal and external defects detrimental to their performance.

7.2 Edges of wire in inserts shall be continuous and uniformly smooth.

8. SAMPLES: When so specified, vendor shall furnish with each shipment of inserts three straight 12-in. long samples of the shaped wire representative of that used for making parts.