

AERONAUTICAL MATERIAL SPECIFICATION

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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	} 99.5 min
Tin	3.5 - 5.8	
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.

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