

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
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## AMS 7245B

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### INSERTS, THREAD FORM, CORROSION RESISTANT STEEL 18Cr - 8Ni

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. FORM: Closely wound wire helices, the insides of which, after assembly, provide threads of diameter and pitch specified on drawing.
3. APPLICATION: Primarily to provide hard, wear resistant, interchangeable threads in metals and nonmetals, and for salvaging worn or damaged threads.
4. COMPOSITION:

#### Check Analysis Under Min or Over Max

Carbon	0.15 max	--	0.01
Manganese	2.00 max	--	0.04
Silicon	1.00 max	--	0.05
Phosphorus	0.17 max	--	0.01
Sulfur	0.35 max	--	0.01
Chromium	17.00 - 20.00	0.20	0.20
Nickel	7.00 - 11.00	0.15	0.15
Molybdenum	0.60 max	--	0.03
Selenium	0.35 max	--	0.03

5. FABRICATION: Parts shall be coiled from cold drawn and shaped wire.
  - 5.1 Tang location and approximate shape shall be as shown in Figure 1. The tang removal notch, when provided, shall be located as shown on the part drawing and shall be of such depth that the part may be installed without failure of the tang and that the tang may be removed, after assembly, without affecting the function of the installed part.
6. TECHNICAL REQUIREMENTS:
  - 6.1 Tensile Properties: Shaped wire before coiling into parts shall have tensile strength not lower than 150,000 psi.
  - 6.2 Bending: Wire shall withstand, without cracking, bending at room temperature through an angle of 180 degrees around a diameter equal to twice the cross sectional dimension of the wire in the plane of bend.
  - 6.3 Spacing: Any part shall be capable of stretching with approximately equal spacing between coils when extended axially beyond its elastic limit.

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**7. QUALITY:**

7.1 Parts 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 parts shall be continuous and uniformly smooth.

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

**9. PACKAGING:**

9.1 Parts of different numbers shall be packed in separate containers.

9.2 Each container shall be marked to give the following information:

INSERTS, THREAD FORM, CORROSION RESISTANT STEEL  
PART NUMBER \_\_\_\_\_  
AMS 7245B  
PURCHASE ORDER NUMBER \_\_\_\_\_  
QUANTITY \_\_\_\_\_  
MANUFACTURER'S IDENTIFICATION \_\_\_\_\_

10. REJECTIONS: Parts not conforming to this specification or to authorized modifications will be subject to rejection.

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