



AEROSPACE MATERIAL SPECIFICATION

AMS3732**REV. B**

Issued 1985-04
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Superseding AMS3732A

Potting Compound, Epoxy
One Part, Filled, Heat Cure, Low CTE

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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Documents

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1. SCOPE:

1.1 Form: This specification covers a filled epoxy resin formulation, supplied as a one-component system, requiring an oven cure for attainment of its properties.

1.2 Application: Primarily for cast shapes; for encapsulation of electronic parts, transformers, coils, and conductors; and for sealing.

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

2.1 SAE Publications: Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods

AMS 2825 - Material Safety Data Sheets

- 2.2 ASTM Publications: Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

ASTM D256 - Impact Resistance of Plastics and Electrical Insulating Materials
ASTM D257 - D-C Resistance or Conductance of Insulating Materials
ASTM D570 - Water Absorption of Plastics
ASTM D648 - Deflection Temperature of Plastics Under Flexural Load
ASTM D695 - Compressive Properties of Rigid Plastics
ASTM D696 - Coefficient of Linear Thermal Expansion of Plastics
ASTM D790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D792 - Specific Gravity and Density of Plastics by Displacement
ASTM D1002 - Strength Properties of Adhesives in Shear by Tension Loading (Metal-to-Metal)
ASTM D1824 - Apparent Viscosity of Plastisols and Organosols at Low Shear Rates by Brookfield Viscometer

- 2.3 U.S. Government Publications: Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

2.3.1 Military Standards:

MIL-STD-794 - Parts and Equipment, Procedures for Packaging and Packing of

3. TECHNICAL REQUIREMENTS:

- 3.1 Material: Shall be an epoxy based compound complete with fillers and curing agents or other ingredients necessary to yield products which meet the requirements of 3.2 and 3.3.

- 3.2 Storage Life: Compound shall meet the requirements of 3.3 at any time up to six months from date of receipt by purchaser when stored below 0°C (32°F) in the original unopened container. The supplier may also provide special storage instructions, such as cold storage, which, when used, can further extend this storage life.

- 3.3 Properties: The product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with test methods specified in 4.5.

- 3.3.1 Uncured Compound: The compound, prepared in accordance with manufacturer's instructions, shall exhibit the following properties:

- 3.3.1.1 Viscosity: Shall be not greater than 20,000 centipoise (20.0 Pa•s) at 74°C (165°F), determined within 5 min. after mixing, using a Brookfield Model LVF Viscometer and No. 4 spindle at 12 revolutions per minute.

- 3.3.1.2 Pot Life: Usable life of the compound, defined as the time to attain double the initial viscosity determined in 3.3.1.1, shall be not less than 30 min. at 74°C (165°F).