



# AEROSPACE MATERIAL SPECIFICATION

AMS3731™

REV. C

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Cancelled 2016-09

Superseding AMS3731B

Potting Compound, Epoxy  
Bisphenol A-Type

## RATIONALE

Cancel due to inaccurate technical requirements.

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## 1. SCOPE:

- 1.1 Form: This specification and its supplementary detail specifications cover epoxy resin formulations based on diglycidyl ether of bisphenol A with an epoxide equivalent of 175 - 195. When properly mixed and cured, these resins produce a rigid or flexible product.
- 1.2 Application: Primarily for cast shapes; for encapsulation of electronic parts, transformers, coils, and conductors; and for sealing.
- 1.3 Safety - Hazardous Materials: While the materials, methods, applications and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.
- 1.4 Classification: The resin system shall be classified by application and processing criteria as shown in each detail specification.

## 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 Specification:

AMS 2350 - Standards and Test Methods  
AMS 2825 - Material Safety Data Sheets  
AMS 3751 - Microspheres, Hollow Glass

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

ASTM D149 - Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies  
ASTM D150 - A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials  
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 D635 - Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position  
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 D1674 - Testing Polymerizable Embedding Compounds Used for Electrical Insulation  
ASTM D1824 - Apparent Viscosity of Plastics and Organosols at Low Shear Rates by Brookfield Viscometer  
ASTM D2240 - Rubber Property - Durometer Hardness

### 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 Detail Specifications: The requirements for a specific compound shall consist of all requirements specified herein in addition to requirements specified in the applicable detail specification. In case of conflict between requirements of this basic specification and an applicable detail specification, requirements of the detail specification shall govern.

3.2 Material: Shall be on an epoxy-based polymer with a curing agent. Each may contain fillers or other ingredients necessary to yield compounds meeting the requirements of 3.3.