AEROSPACE MATERIAL SPECIFICATION

AMS3733	REV. C

Issued 1987-01
Revised 1993-01
Stabilized 2015-05

Superseding AMS3733B

Potting Compound, Epoxy
Two Part, Highly Filled, Heat Cure, High Compressive Strength

RATIONALE

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

STABILIZED NOTICE

This document has been declared "Stabilized" by the SAE AMS P Polymeric Materials Committee and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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SAE WEB ADDRESS:

1. SCOPE:

1.1 Form: This specification covers a highly filled epoxy potting compound supplied as a two-component system.

1.2 Application: Primarily for cast shapes, for encapsulation of electronic parts, transformers, coils and conductors; where high compressive and flexural strengths are required.

1.3 Classification: The compound is classified as follows:

Type I: The color of cured compound shall be within the range of color numbers 34079 and 34102, incl, of FED-STD-595.

Type II: The color shall be optional, either natural color or color as ordered.

1.3.1 Type I shall be supplied unless Type II is ordered.

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 D257 - DC Resistance or Conductance of Insulating Materials
ASTM D618 - Conditioning Plastics and Electrical Insulating Materials for Testing
ASTM D648 - Deflection Temperature of Plastics under Flexural Load
ASTM D695 - Compressive Properties of Rigid 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 D2471 - Gel Time and Peak Exothermic Temperature of Reacting Thermosetting Resins

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

2.3.1 Federal Standards:

FED-STD-595 - Colors

2.3.2 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: The compound shall meet the requirements of 3.3 at any time up to nine months from date of manufacture when stored below 32°C (90°F) in the original unopened containers. Compound which has passed the shelf life expiration date may be tested for extension of shelf life. Tests shall consist of base resin viscosity (3.3.1.1), hardener viscosity (3.3.1.2), and the cured material properties 3.3.2.1 through 3.3.2.7. If the compound meets the requirements of these tests, the shelf life may be extended for three months from the date of test. After expiration of the first shelf life extension, the compound may be tested for additional shelf life extension as stated above. If the compound meets the requirements of these tests, the shelf life may be extended one month from date of retest.

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 Components: