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400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE MATERIAL SPECIFICATION

SAE AMS 3368A

Issued NOV 1968
Revised APR 1988
Reaffirmed APR 2001

Superseding AMS 3364B

Silicone Resin, Elastomeric, Transparent Elevated Temperature Cure

FOREWORD

This Reaffirm contains format/editorial changes only.

1. SCOPE:

1.1 Form:

This specification covers a silicone rubber in the form of a two-component liquid.

1.2 Application:

Primarily for encapsulation and conformal coating applications where dielectric properties are important and an elevated temperature cure is desired.

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.

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.

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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

2.2 ASTM Publications:

Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

ASTM D 150 A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials
ASTM D 412 Rubber Properties in Tension
ASTM D 746 Brittleness Temperature of Plastics and Elastomers by Impact
ASTM D 792 Specific Gravity (Relative Density) and Density of Plastics by Displacement
ASTM D 2240 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 Material:

Product shall consist of two parts; a colorless, transparent, liquid silicone resin and a separate catalyst which, when mixed in proper proportions, will cure at elevated temperature.

3.2 Properties:

Product shall conform to the following requirements; tests shall be conducted in accordance with specified ASTM methods, insofar as practicable, at 25 °C ± 1 (77 °F ± 2) except as otherwise specified herein:

3.2.1 Uncatalyzed Resin:

3.2.1.1 Viscosity: Shall be 4000 - 7000 centipoises, determined using a Brookfield Viscometer, Type LVF, with a No. 4 spindle at 60 revolutions per minute.

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3.2.2 Uncatalyzed Resin and Catalyst:

3.2.2.1 Storage Life: Uncatalyzed resin and catalyst stored in closed containers at a temperture not exceeding 30 °C (85 °F), when mixed in proper proportions at any time up to 12 months from date of shipment, shall meet the requirements of 3.2.3 and 3.2.4.

3.2.3 Catalyzed Resin: Shall have a pot life of not less than eight hours, determined by the time necessary for the viscosity to double in centipoise value from zero hour catalyzed viscosity.

3.2.4 Catalyzed and Cured Resin: The product shall conform to the following requirements; test specimens shall be prepared by mixing and de-airing 100 parts by weight of the basis resin and 10 parts by weight of the catalyst, casting into appropriate shapes, and curing at 145 to 155 °C (293 to 311 °F) for not less than 10 minutes or at 70 to 80 °C (158 to 176 °F) for not less than one hour:

TABLE 1

3.2.4.1	Hardness, Durometer A	40 - 60	ASTM D 2240
3.2.4.2	Specific Gravity	1.02 - 1.08	ASTM D 792, Method A
3.2.4.3	Brittle Point	Pass	ASTM D 746, Procedure B Temperature: -70 °C ± 1 (-95 °F ± 2) Time: 10 minutes
3.2.4.4	Dielectric Constant at 10^5 cycles, maximum	2.88	ASTM D 150
3.2.4.5	Dissipation Factor at 10^5 cycles, maximum	0.002	ASTM D 150
3.2.4.6	Elongation minimum	90%	ASTM D 412

3.3 Quality:

Product, as received by purchaser, shall be uniform in quality and condition, homogeneous, and free from foreign materials and from imperfections detrimental to usage of the product.

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