



AEROSPACE MATERIAL SPECIFICATION

AMS3676

REV. D

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Superseding AMS3676C

Insulation, Sound and Thermal
Resin-Bonded Glass Fiber, Medium Filament

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 resin-bonded glass fibers in the form of felted pads, flat or in rolls.

1.2 Application: Primarily to provide acoustical insulation of aircraft cabins and thermal insulation up to 260°C (500°F).

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

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

ASTM C167 - Thickness and Density of Blanket or Batt Thermal Insulations

ASTM C177 - Steady-State Thermal Transmission Properties by Means of the Guarded Hot Plate

2.3 U.S. Government Publications: Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19103.

2.3.1 Military Standards:

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

3. TECHNICAL REQUIREMENTS:

3.1 Material and Fabrication: The product shall be composed of medium filament glass fibers matted into sheets and bonded with a thermosetting resin.

3.2 Properties: The product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with specified test methods, insofar as practicable.

3.2.1 <u>Density:</u>	0.50 lb per cu ft $\pm$ 0.09 (8.0 kg/m ³ $\pm$ 1.5)	ASTM C167
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3.2.2 <u>Thermal Conductivity, max:</u>	0.26 Btu/hr per sq ft per °F (1.5 W/m ³ per °C)	ASTM C177
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3.2.3 <u>Moisture Absorption, max:</u>	1%	4.5.1
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3.2.4 <u>Vibration Resistance:</u>		4.5.2
Weight loss, max	0.5%	
Packing	None	
Disintegration	None	

3.2.5 <u>Flame Resistance:</u>	Pass	4.5.3
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3.2.6 Average Filament Diameter: Shall be 0.00009 in. $\pm$ 0.00004 (0.002 mm $\pm$ 0.0010), determined by a method agreed upon by purchaser and vendor.

3.2.7 Corrosiveness: The product shall not have a corrosive or other deleterious effect on other materials when exposed to conditions normally encountered in service. Method of test and acceptance standards shall be as agreed upon by purchaser and vendor. Discoloration of metal shall not be considered objectionable.

3.2.8 Acoustical Properties: When specified, the product shall have acoustical properties acceptable to purchaser, determined by a procedure agreed upon by purchaser and vendor.

3.3 Quality: The product, as received by purchaser, shall be uniform in quality and condition, clean, and free from foreign materials and from imperfections detrimental to usage of the product.

3.4 Sizes and Tolerances: Shall be as follows:

3.4.1 Length:

3.4.1.1 Pads: Not less than 12 ft (3.5 m).

3.4.1.2 Rolls: Not less than 50 ft (15 m).

3.4.2 Width: 54 in. $\pm$ 0.5 (1370 mm, $\pm$ 12.51, - 0.