



AEROSPACE MATERIAL SPECIFICATION

AMS3906™/4

REV. C

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Superseding AMS3906/4B

Glass Non-Woven Fiber Tape and Flat Sheet
Epoxy Resin Impregnated, For Hand and Machine Layup
GL-III-26 - 150 (302)

RATIONALE

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

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1. SCOPE:

1.1 Form:

This specification covers one type of epoxy-resin-impregnated, non-woven, glass fiber in the form of tape for hand or machine layup and of flat sheet.

1.2 Application:

These products have been used typically in structural composites requiring high strength up to 150 °C (302 °F), but usage is not limited to such applications.

1.3 Classification:

GL-III-26 - 150 (302), non-woven "S" glass fiber impregnated with epoxy resin for service from -55 to +150 °C (-67 to +302 °F).

2. APPLICABLE DOCUMENTS:

See AMS 3906.

3. TECHNICAL REQUIREMENTS:

3.1 Basic Specification:

The complete requirements for procuring the product described herein shall consist of this document and the latest issue of the basic specification, AMS 3906.

3.2 Product:

Shall be a non-woven, high tensile strength, "S" glass fiber meeting the requirements of MIL-R-60346, Type III, impregnated with epoxy resin formulated to meet the requirements specified herein.

3.3 Properties of Uncured Product:

Shall be as shown in Table 1, 3.3.6, and 3.3.7. Tests shall be performed on the product as-received, after warming to above the dew point prior to sampling.

TABLE 1 - Properties

Paragraph	Property	Requirement	Test Method
3.3.1	Volatile Content by weight, maximum	2%	ASTM D 3530 165 °C ± 5 (329 °F ± 9) 15 minutes ± 1
3.3.2	Total Nonfiber Content by weight	26% ± 3	ASTM D 3529
3.3.3	Resin Flow by weight	9% ± 6	ASTM D 3531 165 °C ± 5 (329 °F ± 9)
3.3.4	Gel Time	3 minutes ± 2	ASTM D 3532 165 °C ± 5 (329 °F ± 9)
3.3.5	Tack	Shall adhere for 30 minutes, minimum	4.5.2 of AMS 3906

3.3.6 Total weight per unit area, determined in accordance with 4.5.3 of AMS 3906, shall be 336 grams per square yard ± 21 (402 g/m² ± 25).

3.3.7 Ply thickness, uncured, determined in accordance with 4.5.4 of AMS 3906, shall be 0.009 inch ± 0.002 (0.23 mm ± 0.05).

3.4 Properties of Cured Laminate:

Shall be as follows, determined on specimens cut from a test panel prepared and tested as specified in the basic specification.

3.4.1 Mechanical Properties: Shall be as shown in Table 2.