

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS 3836

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Revised

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

FABRIC, GLASS (182) (DECORATIVE GRADE)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily as a reinforcing material for decorative plastic laminates.
3. TECHNICAL REQUIREMENTS:
 - 3.1 General:
 - 3.1.1 Color: The material shall be uniformly white with no green cast permissible.
 - 3.1.2 Treatment: The material shall have been treated in such a manner as to remove the lubricating materials or binders, followed by a chemical treatment which will meet the requirements of 3.1.1. The chemical treatment shall aid in wetting the fabric with a polyester resin and shall provide an intermediate chemical bond between the fabric and a polyester type resin when the fabric is used for reinforcing plastic laminates.
 - 3.1.3 Yarn: The material shall be woven from ECE225-2/2 yarn.
 - 3.1.4 Weave: The weave shall be an eight shaft, satin weave in which each warp and fill yarn goes under one, and over seven, then under one, etc. The interweaving of the warp and fill yarns shall be staggered, i.e., the No. 1 warp yarn shall go under the No. 1, No. 9, No. 17, etc. fill yarn, and the No. 2 warp yarn shall go under the No. 2, No. 10, No. 18, etc. fill yarn, etc.
 - 3.2 Properties: The product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with listed methods, insofar as practicable.

3.2.1 Weight, oz per sq yd	11.4 to 13.4	ASTM D579-49
3.2.2 Thread Count, ends per in.		
Warp	58 to 62	ASTM D579-49
Fill	54 to 58	
3.2.3 Flexural Strength (Flatwise)		
Dry, psi, min	45,000	See 3.2.3.1
Wet, (2 hr boil), psi, min	30,000	

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3.2.3.1 The flexural strength (flatwise) shall be determined on laminated 1/8 x 1/2 x 1/4 in. sheets in accordance with Federal Specification L-P-406b, Method 1031, on a 2 in. center distance span. The individual plies of the test laminate shall be cross-laminated with respect to the fabric fill and warp directions. Test laminates shall be made using resins of the polyester type and cured at a pressure not exceeding 50 psi.

3.2.4 Glass Content, % by weight, min 99.0 ASTM D579-49

4. QUALITY: The product shall be uniform in quality and condition, clean, smooth, and free from foreign materials and from defects detrimental to fabrication, appearance, or performance of parts.

5. TOLERANCES: Unless otherwise specified on the drawing or purchase order, the tolerance on the width shall be $\pm 1/2$ inch.

6. LENGTH AND WIDTH OF ROLL: Unless otherwise specified, the fabric shall be furnished in rolls not less than 100 yd long by 38 in. wide, on cardboard tubes 1 in. longer than the over-all width of the fabric.

7. REPORTS:

7.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report stating that the product meets the requirements of this specification. This report shall include the purchase order number, material specification number, vendor's number, width, and quantity.

7.2 Unless otherwise specified, the vendor of finished or semi-finished parts shall furnish with each shipment three copies of a report showing the purchase order number, material specification number, contractor or other direct supplier of material, part number, and quantity. When material for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of material to determine conformance to the requirements of this specification, and shall include in the report a statement that the material conforms, or shall include copies of laboratory reports showing the results of tests to determine conformance.

8. IDENTIFICATION: Each roll of fabric shall have attached a tag showing the manufacturer's name or trade mark and AMS 3836.

9. PACKAGING:

9.1 Packaging shall be accomplished in such a manner as to ensure that the fabric, during shipment and storage, will be protected against damage from exposure to moisture or weather or any normal hazard.