Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

AEROSPACE MATERIAL SPECIFICATION

AMS 3823A
Superseding AMS 3823
Issued 5-1-69
Revised 5-1-70

FABRIC, GLASS CLOTH
Style 7781-550

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

2. APPLICATION: Primarily as a reinforcing material for structural plastic laminates. Suitable for use with polyester and epoxy resin matrices.

3. TECHNICAL REQUIREMENTS:

3.1 General:

3.1.1 Finish: The material shall have been suitably cleaned to remove all lubricating materials or binders, followed by a chrome complex finish (550) which will meet the requirements of 3.2.4.

Ø The chrome complex finish shall aid in wetting the fabric with resin and shall provide an intermediate chemical bond between the fabric and resin when the fabric is used for reinforcing plastic laminates.

3.1.2 Yarn: The material shall be woven from ECDE75 ~ 1/0 yarn.

3.1.3 Weave: The weave shall be an eight harness, 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: When ASTM methods are specified for determining conformance to the following requirements, tests shall be conducted in accordance with the issue of the ASTM method listed in the latest issue of AMS 2350.

3.2.1	Weight, oz per sq yd	8.1 - 9.2	ASTM D1910
Ø 3.2.2	Nominal thickness, in.	0.0085 ± 0.001	ASTM D374, Method C
3.2.3	Fabric Count, ends per in.		ASTM D1910
	Warp	55 - 59	
	Fill	52 - 56	
Ø 3.2.4	Chrome Complex Level, % by wt.	0.020 - 0.035	ASTM D2410
3.2.5	Breaking Strength, lb per in. of width, min		ASTM D579
	Warp	210	
	Fill	195	

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

4.1 Imperfections: In any 100 yd of fabric supplied there shall be not more than 10 major, or equivalent minor (2 minors = 1 major), imperfections, based on the following classification:

Imperfection	Description	Classification
Bias or bowed filling	Distorted from horizontal by more than 3 in. for 38 in. width and proportionately for all other widths.	Minor
Baggy, ridgy, or wavy cloth	Clearly noticeable.	Major
Cut or tear	2 in. or more in combined directions.	Major
	Less than 2 in. but greater than 1/4 in. in combined directions.	Minor
Hole	1/2 in. or more in diameter.	Major
	Less than 1/2 in. in diameter.	Minor
Spots, streaks, or stains	Clearly noticeable 2 in. or more in combined directions.	Major
	Clearly noticeable less than 2 in. in combined directions.	Minor
Tender or weak spot	Clearly noticeable 2 in. or more in combined directions.	Major
	Clearly noticeable less than 2 in. but greater than 1/4 in. in combined directions.	Minor
Smash	3 in. or more in combined directions.	Major
	Less than 3 in. in combined directions.	Minor
Broken or missing ends or picks	3 or more contiguous regardless of length or 2 contiguous more than 36 in. in length.	Major
	2 contiguous less than 36 in in length.	Minor
Floats and skips	2 in. or more in combined directions.	Major
	Less than 2 in. in combined directions.	Minor
Coarse or light place	Over 1/2 in. in width causing thickness outside of limits specified in 3.2.2.	Minor
Selvage defects	Cut or torn	Major
	Curled or folded under.	Minor
Crease	Hard, embedded and folded over on self.	Major
Brittle or fused area	Any.	Major
Uneven finish	Thin areas where finishing compound is missing or insufficient.	Major