



SAE The Engineering
Resource For
Advancing Mobility

400 COMMONWEALTH DRIVE WARRENDALE PA 15096

AEROSPACE MATERIAL SPECIFICATION

AMS 3810A

Issued 3-1-44
Revised 10-1-82

TAPE, ADHESIVE, CLOTH BACK

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 2-1-56. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the "A" revision of the subject specification.

.....

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of 10-1-82. By this action, subject specification number and title will be deleted from the active specification index of Aerospace Material Specifications.

This specification is under the jurisdiction of AMS Committee "C".

SAE Technical Board rules provide that ' All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade or their use by governmental agencies is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents.

CANCELED

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 3810A

Issued 3-1-44
Revised 6-15-53

TAPE, ADHESIVE, CLOTH BACK

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily for effecting water-resistant and reinforcing seals on moisture barriers and shipping containers.
3. MATERIAL:
 - 3.1 Cloth Backing: Shall be sheeting having not less than 60 threads per in. in warp and in filling directions. Thread shall be free from knots, lumps, and irregularities of twist, in conformance with the best manufacturing practices. Sheetting shall be coated on one side with a moisture-resistant resin
 - 3.2 Adhesive: Shall be pressure-sensitive type, useful over the range of 32-149F, and shall be applied to the backing in a smooth, uniform coating, free of pin holes or bare spots. It shall not transfer to, or remove particles of backing from, adjacent layers on a roll.
4. TECHNICAL REQUIREMENTS:
 - 4.1 General:
 - 4.1.1 Color: Shall be as specified on drawing or purchase order.
 - 4.1.2 Corrosion: Material shall not have a corrosive effect on metals and shall not adversely affect organic protective coatings.
 - 4.2 Properties:
 - 4.2.1 Adhesion to Test Panel: Tape shall have an average adhesion not lower than 25 oz per in. width when tested as follows:

REPRODUCED COPY
SAE IN LITHOGRAPH
8-29-79
DATE
SIGNATURE



Documents
Document Sharing Hub

Distributed under license from the IHS Archive

- 4.2.1 1 Test panels shall be 1 x 3 in paper laminated plastic plates consisting of alcohol-soluble phenolic resin or fiber-filled resin, cured between highly polished metal cauls to produce a smooth surface, free of visible scratches, pits or similar defects. Fiber-filled resins shall contain not less than 35% resin by weight. Panels shall not increase in weight more than 3% when immersed 24 hr in water at $70\text{ F} \pm 2$. The panels shall be cleaned with gasoline and then with methanol, thoroughly dried, and stored in a desiccator until used. A specimen of tape 1 x 6 in. shall be applied, completely covering the panel, with a 1 x 3 in. section of tape extending beyond on end. The tape shall be rolled 5 times in each direction at approximately 12 in. per min. with a 10 lb hard-surfaced hinged roller of approximately 5 in. diameter. Paper may be applied to the adhesive side of the free end of tape to prevent adhesion during rolling. Immediately, the free end of tape shall be doubled back at 180 degrees and 1 in. of tape peeled off the panel at the folded end. This end of the panel shall be clamped in the lower jaw of a tensile testing machine, and the free end of tape clamped in the upper jaw. The machine shall be a pendulum-type instrument operated at 12 in. per minute. The maximum tension required to peel the tape from the panel is the adhesion value. The average of 5 tests shall be reported.
- 4.2.2 Adhesion to Backing: Tape shall have an average adhesion not lower than 25 oz per in. width when tested as follows:
- 4.2.2.1 A strip of sample tape 1 in. wide shall be applied to a test panel described in 4.2.1.1 and pressed firmly. This tape shall be used as the test surface. Another strip of tape shall be applied directly over the first and stripped off as in 4.2.1.1. The average of 5 tests shall be reported.
- 4.2.3 Adhesion at Low Temperature: The tape shall retain adhesion to paper and to its own backing when tested as follows:
- 4.2.3 1 A specimen shall be prepared by applying a strip of tape 12 in. long to a 14 in. strip of 60 lb kraft wrapping paper slightly wider than the tape. A second strip of tape 10 in. long shall be applied to the backing of the first strip and pressed firmly with the fingers. The specimen shall be exposed to a temperature of $140\text{ F} \pm 2$ for 24 hr, cooled at room temperature for 2 hr, and placed in a refrigerator at $-25\text{ F} \pm 2$ for 2 hours. At the end of this period, the specimen shall be drawn and flexed once over and around a hard, smooth cylindrical surface having a 1.5 in. diameter, the ends of the specimen being held approximately parallel. The flexing shall be done in the refrigerator at the specified temperature and with the paper in contact with the cylindrical surface. The specimen shall then be examined for loss of adhesion of the tape to the paper and to the tape backing.
- 4.2.4 Resistance to Oil: After oil immersion, tape shall have an average adhesion not lower than 25 oz per in. width, and no specimen shall have a value lower than 15 oz per in. width. The average adhesive transfer shall be not more than 25% of the area of tape in contact with the test surface. Test method shall be as follows: