



Engineering Material Specification

Material Name

TAPE, POLYTETRAFLUOROETHYLENE - PRESSURE SENSITIVE

Specification Number

ESA-M3G73-A

1. SCOPE

The material defined by this specification is a pressure sensitive polytetrafluoroethylene tape coated on one side.

2. APPLICATION

This specification was released originally for material used as an anti-friction surface for the steering column instrument panel opening cover.

3. REQUIREMENTS

3.1 CONDITIONING

All test values indicated herein are based on materials conditioned in a controlled atmosphere of $23 \pm 2^{\circ}\text{C}$ and $50 \pm 5\%$ relative humidity for 24 h prior to testing and tested under the same controlled conditions.

3.2 THICKNESS 0.0025 - 0.004 in
(0.063 - 0.10 mm)

3.3 BREAKING STRENGTH, min 20 oz/in (219 N/m) width
(ASTM D 1000)

Elongation, max 200%

3.4 ADHESION TO STEEL, min 20 oz/in (219 N/m) width
(ASTM D 1000)

3.5 ADHESION TO PAINTED METAL, min 25 oz/in (274 N/m) width
(ASTM D 1000)

3.6 AGED ADHESION, Painted Metal, min 30 oz/in (328 N/m) width

Test Method: Prepare bonded samples as described in ASTM D 1000. Expose the samples in a mechanical convection oven maintained at $70 \pm 1^{\circ}\text{C}$ for 72 h. Permit samples to cool at $23 \pm 2^{\circ}\text{C}$ for 2 h minimum prior to test.

3.7 LOW TEMPERATURE FLEXIBILITY Shall not crack nor show any evidence of failure.

Test Method: Samples approximately 6 in (150 mm) in length shall be conditioned for 16 h at -29°C and shall then be bent 180° (3.1 rad) on itself.

Date	Para. No.	Revisions	Approval
			C. Zyrus 11-30-78
1979 01 10		Metricated, Renumbered and Retyped CAH2 823385	E. F. Francis 11-30-78
1964 02 27		Released AS2-442	

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3.8 MIGRATION STAIN

None

Test Method: The material shall be placed in intimate contact with a freshly painted light colored (white or blue) enameled panel and also light colored vinyl trim material, ESB-M2F37, and subjected to 200 h in the Westinghouse Fluorescent Sunlight cabinet described in FLTM BO 15-1.

3.9 ODOR

No offensive odor in the "as received" condition or after the heat aging test outlined in para. 3.6.

3.10 UNWIND PULL, max

20 oz/in (219 N/m) width

3.11 SUPPLIER'S RESPONSIBILITY

Material supplied to this specification must be equivalent to that originally approved. Changes in formulation or processing shall not be made without prior approval as described in Supplier Procedure I-A.

4. APPROVAL OF SUPPLIERS

Suppliers to this specification must be approved by the affected product engineering office. Procedure for gaining approval of a specific material to a new/existing ES-M specification is contained in Supplier Procedure I-A. Approved new suppliers will be added to the Engineering Materials Approved Source List.

5. GENERAL INFORMATION

This information is for direction of the user and is not a requirement for the supplier.

The useful temperature range for this material is -53 to 205°C continuous. Intermittent use up to 260°C is possible. Users should note, however, that above 205°C, the film gives off small quantities of toxic fumes and ventilation must be provided.

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