



AEROSPACE MATERIAL SPECIFICATION

AMS-T-6841™

REV. A

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Superseding AMS-T-6841

Tape and Sheet, Adhesive, Rubber and Cork Composition

RATIONALE

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

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Under Department of Defense policies and procedures, any qualification requirements and associated qualified products lists are mandatory for DOD contracts. Any requirement relating to qualified products lists (QPL's) has not been adopted by SAE and is not part of this technical report.

1. SCOPE:

1.1 Form:

This specification covers one type of tape and sheet for use in the installation of windshields, panels, and windows in cabins and cockpits of aircraft.

1.2 Application:

The tape and sheet are intended for use as a seal and packing for the installation of glass or acrylic plastic windshields, panels and windows in cabins and cockpit of aircraft.

1.3 Safety-Hazardous Materials:

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

2. APPLICABLE DOCUMENTS:

The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

2.1 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

L-P-390	Plastic, Molding Material, Polyethylene, Low and Medium Density
NN-P-530	Plywood, Flat Panel
QQ-A-250/4	Aluminum Alloy 2024, Plate and Sheet
TT-T-291	Thinner, Paint, Volatile Spirits (Petroleum Spirits)
UU-P-268	Paper; Kraft, Untreated, Wrapping
MMM-A-260	Adhesive, Water-resistant (For Sealing Waterproof Paper)
PPP-B-601	Boxes, Wood, Cleated-Plywood
PPP-B-621	Boxes, Wood, Nailed and Lock-Corner
PPP-B-636	Box, Fiberboard
PPP-B-1055	Barrier Material, Waterproofed Flexible
PPP-T-45	Tape, Gummed Paper Reinforced & Plain, for Sealing & Securing

MIL-P-5425	Plastic Sheet, Acrylic, Heat Resistant
MIL-P-8184	Plastic Sheet, Acrylic, Modified
MIL-C-17564	Cloth, Holland
MIL-C-38736	Compound, Solvent, for Use in Integral Fuel Tanks
MIL-P-83310	Plastic Sheet, Polycarbonate, Transparent

MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129	Marking for Shipment and Storage

2.2 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM B 21 Rod Naval Brass, Bar and Shapes

3. TECHNICAL REQUIREMENTS:

3.1 Materials and Construction:

The tape and sheet shall consist of a granulated cork uniformly dispersed in a synthetic rubber compound which shall be calendered on print cloth and vulcanized to meet the detail requirements of this specification. The cloth backing shall be coated with a thin film of pressure-sensitive adhesive, over which shall be applied Holland cloth or polyethylene.

- 3.1.1 Cork: The tape and sheet shall consist of uniformly dispersed cork particles in a synthetic rubber binder. The cork content shall be not less than 20 nor more than 25 percent by weight of the tape or sheet and shall be free of hardback and adulterants. The cork particles shall all pass through a 20-mesh sieve with not more than 10 percent passing through a 40-mesh sieve.
- 3.1.2 Backing: The backing shall consist of print cloth weighing approximately 3 ounces per square yard and having a thread count of not less than 60 by 60 inch in the warp and filling.
- 3.1.3 Adhesive: The adhesive shall be pressure sensitive and may contain either synthetic or natural rubber or any combination thereof, but shall not contain reclaimed rubber.
- 3.1.4 Holland cloth: The Holland cloth shall conform to MIL-C-17564.
- 3.1.5 Polyethylene: The polyethylene shall conform to type I, grade I, class M of L-P-390.

3.2 Data:

Unless otherwise specified in the contract or order, no data are required by this specification or any of the documents referenced in section 2 (see 8.1).

3.3 Surface finish:

The tape and sheet shall have a sanded finish and shall be as smooth as possible, consistent with the coarse character of the cork.

3.4 Size:

Unless otherwise specified by the procuring activity, tape shall be in rolls of 100 +2 feet in length, in thickness as specified in table IA and widths shall be as specified in table IB. Sheets sizes shall be as specified in table II and thickness as specified in table IA.

TABLE IA. Tolerances, Inch/Pound Units, Tape/Sheet

DASH	Thickness Inches +0.020 – 0.000	Weight lb/sq.yd ± 10 percent
1	.031 (1/32)	1-1/2
2	.062 (1/16)	2-1/2
3	.094 (3/32)	3-1/2
4	.125 (1/8)	4-1/2

TABLE IB. Width Tape

DASH	Inches ± 0.031 (1/32)
01	.250 (1/4)
02	.500 (1/2)
03	.750 (3/4)
04	1.000 (1)
05	1.250 (1-1/4)
06	1.500 (1-1/2)
07	2.000 (2)
08	2.500 (2-1/2)

TABLE II. Sheet Size

DASH	Inches + .250 - 0.000
1S	24 X 24
2S	36 X 36

3.5 Weight:

- 3.5.1 As received: The as-received weight of the tape or sheet shall include the weight of the Holland cloth or polyethylene, and shall be as specified in table IA, when tested as specified in 4.6.2.
- 3.5.2 After oven aging: The weight of the as-received sample as determined in 3.5.1 shall not vary by more than ±10 percent after oven aging (see 4.4.2), when tested as specified in 4.6.2.

3.6 Physical properties:

The physical properties shall conform to the requirements of table III based on tests made before removal of the Holland cloth or polyethylene (see 4.6.3 and 4.6.4).

TABLE III. Physical properties

Property	As received	After oven aging (see 4.3.2)
Compressibility (percent)	20-35	15-40
Recovery (percent) (min)	90	80
Low temperature resistance (percent) (min)	40	No requirement

3.7 Adhesive strength:

The adhesive shall not transfer to the Holland cloth or polyethylene, nor reveal bare spots when unrolled. When applied to an aluminum alloy panel, as specified in 4.6.5, it shall be capable of supporting a weight of 3 pounds per inch of width for a period of at least 1 minute.

3.8 Accelerated crazing:

The tape and sheet shall not contain ingredients that will cause MIL-P-8184 acrylic, MIL-P-5425 acrylic, or MIL-P-83310 polycarbonate plastic sheet to craze or crack when tested as specified in 4.6.6.

3.9 Identification of product:

Each roll of tape shall be marked or tagged, and each sheet shall be marked in a permanent and legible manner with the information specified in 5.3.

3.10 Water vapor transition rate:

The average water vapor transmission rate (WVTR) of the tape, when tested as specified in 4.6.7 shall not exceed 4.0 gms./100 sq inch/24 hours.

3.11 Workmanship:

The tape and sheet shall conform to the quality and grade of product established in this specification. Occurrence of defects shall not exceed the applicable quality levels.