

L-T-99C
January 1, 1975
~~SUPERSEDING~~
Int. Fed. Spec. L-T-0099B (GSA-FSS)
May 28, 1970 and
Fed. Spec. L-T-99A
September 11, 1958

FEDERAL SPECIFICATION

TAPE, PRESSURE-SENSITIVE ADHESIVE, IDENTIFICATION

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification establishes the requirements for a printable pressure-sensitive adhesive tape primarily intended for labeling, identification, and edging applications.

1.2 Classification.

1.2.1 Types. Pressure-sensitive adhesive tape covered by this specification shall be of the following types, as specified (see 6.2):

- Type I - Interior labeling and identification.
- Type II - Edging
- Type III - Exterior labeling and identification.

2. APPLICABLE DOCUMENTS

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

Federal Specification:

PPP-T-600 Tape, Pressure-Sensitive Adhesive: Packaging and Packing Of.

Federal Standards:

Fed. Test Method Std. No. 147 - Tapes, Packaging, Adhesive and Gummed; Methods of Inspection, Sampling, and Testing.

Fed. Std. No. 595 - Colors.

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(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

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3. REQUIREMENTS

3.1 Material.3.1.1 Backing.

3.1.1.1 Type I and II. The tape backing shall be a polyester film, or a cellulose acetate plastic film laminated to paper (reinforcing tissue) with a continuous film of water insoluble pigmented or unpigmented pressure-sensitive adhesive. The functional (exterior) adhesive shall be on the paper side.

3.1.1.2 Type III. The tape backing material shall consist of an unplasticized poly-vinyl chloride film.

3.1.2 Adhesive. The tape backing shall be coated on one side with a pressure-sensitive pigmented or unpigmented adhesive, as specified, which requires no moisture, heat, or other preparation prior to application.

3.2 Physical properties.

3.2.1 The physical properties for the tapes shall comply with test values required in table I when tested as specified in Section 4.

TABLE I. Physical properties

Property	Type I	Type II	Type III	Test
Thickness, inches maximum	---	0.008	---	4.4.2
Tensile strength, lb/inch minimum				
Dry	25	25	15	4.4.2
Wet	---	---	15	4.4.4
Adhesion oz/inch minimum				
Initial	20	14	20	4.4.2
After accelerated aging	20	14	10	4.4.3
After accelerated weathering	---	---	30	4.4.2

3.2.2 Weathering. After testing as described in 4.4.2 for 96 hours, type III tape shall have an adhesion value as specified in table I and shall show no evidence of lifting or buckling that would impair the tape's serviceability.

3.3 Finished tape.

3.3.1 Adhesion. The adhesive shall be such that the tape will adhere immediately and firmly to clean, dry surfaces to which it is normally applied. When the roll is unwound, the backing shall not tear, and the adhesive shall not transfer or split from the face of the tape to the back of the adjacent layer.

3.3.2 Rolls. The tape shall be wound in rolls, adhesive side in, on cores made of paper-fiber or plastic. The core shall have sufficient rigidity to prevent distortion of the roll under normal conditions of transportation, storage, and use. The core shall have an inside diameter of 3 inches $-0, +1/16$ inch.

3.3.3 Length and width. The width shall be as specified (see 6.2). A width tolerance of $\pm 1/32$ inch will be allowed. The length shall be evenly wound in 72 yard rolls.

3.3.4 Splices. A maximum of 3 splices shall be allowed per each 72 yards of roll length. Any splice shall be such that it will not separate when the tape is unwound in test or application.

3.3.5 Colors. Tapes shall be furnished in colors as specified (see 6.2). Colors specified in table II shall approximate the corresponding color chip number of Fed. Std. No. 595. Transparent and other colors when specified, shall be in accordance with available commercial colors.

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TABLE II. Color

Color	Fed. Std. No. 595 number designation	Type I	Type II	Type III
White	17875	X	X	X
Black	17038	X	X	X
Red	11136	X	X	X
Green	14110	X		X

3.3.6 Transparency. The tape shall be sufficiently transparent to allow easy reading of 10 point type when transparent tape is applied directly over it.

3.3.7 Printing. Tape shall be furnished printed when specified (see 6.2). The printed legend, symbols, or colors shall be as specified in the contract or order. The printing shall be distinct and clear. When the tape is removed from a freely-rotating roll at a rate of 15-20 inches per second, there shall be no transferring or off-setting of the ink from the backing of the tape to the adjacent layer of adhesive either initially or after the print stability test (see 4.4.5).

3.3.8 Workmanship. The tape shall be free from defects which detract from its appearance or impair its serviceability. The adhesive shall be a smooth, uniform coating, covering the entire area of one side of the tape. The edges of the tape shall be straight, true, and unbroken.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 End item examination. Sampling and examination of the item shall be as specified in Section 7 of Fed. Test Method Std. No. 147.

4.3 End item testing. Sampling and examination for end item testing shall be as specified in Section 7 of Fed. Test Method Std. No. 147 at an Acceptable Quality Level (AQL) of 4 percent.

4.4 Tests. Tests for acceptance of individual lots shall consist of tests for all requirements specified in Section 3.

4.4.1 Specimen. The specimen shall be selected and prepared as described in Method 4.1 of Fed. Test Method Std. No. 147.

4.4.2 Test methods. The following tests shall be conducted as described in Fed. Test Method Std. No. 147, except that one specimen per sample unit shall be tested:

<u>Test</u>	<u>Method</u>
Thickness	36.2
Tensile strength (dry)	30.2
Adhesion	10.2
Accelerated aging	61.1
Accelerated weathering	63.2

4.4.3 Accelerated aging. Specimens of tape shall be aged as described in Method 61.1 of Fed. Test Method Std. No. 147 for a period of 30 hours. After separation of the strips of tape as described in Method 61.1, the tape shall be considered to have unsatisfactory aging qualities if it breaks or if the adhesive separates from the backing. The tape, when tested in accordance with 4.4.2, shall meet the adhesion requirement of table I. The upper-most strip shall be used for this test of adhesion value.

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4.4.4 Wet tensile (type III only). Soak one specimen per sample roll in distilled water for 6 hours. Then test immediately for tensile as described in 4.4.2. The values shall comply with table I.

4.4.5 Print stability. Place a roll of the printed tape in an air circulating oven maintained at $100 \pm 5^\circ\text{F}$. on perforated racks, to insure circulation of the air around the rolls. Condition at this temperature for 72 hours. Remove the rolls and condition as described in 4.4.1 for at least 2 hours. Unwind the rolls and examine as described in 3.3.7.

5. PREPARATION FOR DELIVERY

5.1 Packaging and packing. Packaging and packing shall be in accordance with the requirements of PPP-T-680. The level of packaging and packing shall be A, B, or C, as specified in the contract or order (see 6.2).

5.2 Marking. Containers of tape shall be marked in accordance with the requirements of PPP-T-680.

6. NOTES

6.1 Intended uses.

6.1.1 Type I tape is intended for interior use as an identification medium. In the printed form it may be used for labeling applications including files, containers of all types, charts, etc. Colored tape, with or without printing can be used for identifying the metal in metal shapes, color coding, etc. It is not recommended for edging purposes.

6.1.2 Type II tape is suited for edging of documents, maps, charts, etc., to protect the edges from tearing or other damage during handling and storage.

6.1.3 Type III tape is intended for both interior and exterior identification applications such as Air Mail tape and other special markings required in packaging, office use and similar applications. It is not recommended for edging purposes.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Type of tape required (see 1.2).
- (c) Width of tape required (see 3.3.3).
- (d) Color (see 3.3.5).
- (e) Printing (see 3.3.7).
- (f) Selection of applicable levels of packaging and packing (see 5.1).
- (g) Marking required (see 5.2).

6.3 Storage. The tape should be stored in the original container in a cool location. It should not be stored in close proximity to steam pipes, radiators, or other sources of heat, or in a location where it may be exposed to direct rays of the sun.

MILITARY INTERESTS:

Custodians:

Army - GL
Navy - SA
Air Force - 84

Review Activities:

Army - SM, AV

CIVIL AGENCY COORDINATING ACTIVITIES:

TVA
USDA-AFS
HEW-FDA, NIH
NASA-JFK
DOT-ACO

Preparing Activity:

GSA-FSS

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