



Designation: D6123/D6123M – 97 (Reapproved 2020)

Standard Specification for Pressure-Sensitive Tape for Light-Duty Packaging and General Purpose Masking¹

This standard is issued under the fixed designation D6123/D6123M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers paper-backed pressure-sensitive tapes used for light-duty packaging and masking.

1.2 The values stated in either inch-pound or SI units are to be regarded separately as standard. The values stated in each system are not exact equivalents; therefore, each system must be used independently, without combining values in any way.

1.3 The following safety hazards caveat pertains only to the test methods portion, Section 13, of this specification. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

[D996 Terminology of Packaging and Distribution Environments](#)

[D3121 Test Method for Tack of Pressure-Sensitive Adhesives by Rolling Ball](#)

[D3330/D3330M Test Method for Peel Adhesion of Pressure-Sensitive Tape](#)

[D3611 Practice for Accelerated Aging of Pressure-Sensitive Tapes](#)

[D3652/D3652M Test Method for Thickness of Pressure-Sensitive Tapes](#)

¹ This specification is under the jurisdiction of ASTM Committee D10 on Packaging and is the direct responsibility of Subcommittee D10.14 on Tape and Labels.

Current edition approved Oct. 1, 2020. Published October 2020. Originally approved in 1997. Last previous edition approved in 2012 as D6123/D6123M – 97 (2012). DOI: 10.1520/D6123_D6123M-97R20.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

[D3715/D3715M Practice for Quality Assurance of Pressure-Sensitive Tapes](#)

[D3759/D3759M Test Method for Breaking Strength and Elongation of Pressure-Sensitive Tape](#)

[D3951 Practice for Commercial Packaging](#)

[D5486/D5486M Specification for Pressure-Sensitive Tape for Packaging, Box Closure, and Sealing](#)

[D5570 Test Method for Water Resistance of Tape and Adhesives Used as Box Closure](#)

2.2 *Federal Specification:*

[PPP-T-680 Tape, Pressure-Sensitive: Packaging and Packing of](#)³

2.3 *ISO Standard:*

[ISO 9002 Quality Systems Model for Quality Assurance in Production and Installation](#)⁴

3. Terminology

3.1 *Definitions*—General definitions for packaging and distribution environments are found in Terminology [D996](#).

4. Significance and Use

4.1 The pressure-sensitive paper-backed tapes covered by this specification are intended for packaging applications such as bundling small parts to be overpacked, holding small parts to larger assemblies, and for temporary closure of chipboard boxes and fiberboard boxes that are not to be shipped by common carrier. They are also for general use applications such as in temporarily masking surfaces from being covered by paint, varnish, or other finishing materials. These tapes are not intended to be a substitute for tapes covered by Specification [D5486/D5486M](#). Type I is for use where conformability is desired. Type II is for uses requiring more strength and for straight line masking.

5. Classification

5.1 Type I is crepe paper backed.

5.2 Type II is flat paper backed.

³ Available from Standardization Documents Order Desk, Bldg. 4, Section D, 700 Robbins Ave., Phila., PA 19111-5094. Attn: NPODS.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

6. Ordering Information

6.1 The inquiry or order shall include the following:

- 6.1.1 ASTM Designation and date of issue,
- 6.1.2 Type required (see Section 5),
- 6.1.3 Roll width and length (see Section 9),
- 6.1.4 When testing and inspection certification is required and (see Section 16), and
- 6.1.5 Level of packaging and packing when other than commercial (see Section 17).

7. Materials and Manufacture

7.1 The materials used in the construction of the tape shall be such as to ensure conformance to the requirements of this specification.

7.2 *Backing*—The paper backing shall be treated to make it resistant to water, paints, varnish and other finishing materials. The backing shall have sufficient strength to allow the tape to be unwound from the roll and to be removed from the masked surface after application of finishing materials without breakage or delamination.

7.3 *Adhesive*—The adhesive shall be pressure-sensitive, water-insoluble, and shall require no moisture, heat, or other preparation prior to or after application to clean, dry surfaces. The adhesive shall be coated in a smooth and evenly distributed layer on one side of the backing.

7.4 *Rolls*—The tape shall be evenly wound in rolls, adhesive side in, on cores made of paper-fiber or plastic. The core shall have sufficient rigidity to prevent distortion under normal conditions of transportation and use. The inside diameter of the core shall be 76.2 $-0 + 1.6$ mm (3 $-0 + 1/16$ in.). When the roll is unwound, the backing shall not tear; the adhesive shall not transfer nor split from the face of the tape backing to the adjacent layer before or after aging (see Table 1).

8. Physical Properties

8.1 The tape shall comply with the physical requirements listed in Table 1 and the water-solubility requirement as described in Test Method D5570.

TABLE 1 Properties

		Type I	Type II	Test
Adhesion	Before	25	25	13.3.3
	aging	27	27	
After	oz/in., min	20	20	13.3.3
	aging	22	22	
Tack (rolling ball), max	in.	6	...	13.3.3
	mm	150	...	
Tensile	lb/in., min	16	25	13.3.3
	N/100 mm, min	280	440	
Elongation, percent	min	5	...	13.3.3
	max	15	...	
Thickness,	in., max	0.009	0.009	13.3.3
	mm, max	0.230	0.230	

9. Dimensions, Mass, and Permissible Variations

9.1 *Width*—The width of the tape shall be 1/2 in. or 12 mm; 3/4 in. or 18 mm; 1 in. or 24 mm; 1 1/2 in. or 36 mm; 2 in. or 48 mm or other commercially available widths, as specified (see 6.1.3). A width tolerance of $\pm 1/32$ in. or 0.75 mm shall be allowed on all widths.

9.2 *Length*—The length shall be 60 yd or 50 or 55 m or other commercially available lengths, as specified (see 6.1.3).

9.3 *Splices*—The roll shall consist of a single length of tape, except that any single roll may contain a maximum of one splice. A splice shall not separate when the roll is unwound by hand or machine.

10. Workmanship

10.1 The tape shall be constructed uniformly and be free of defects that impair its usefulness for the purpose intended (see Section 4). The adhesive coating shall be a uniform coating covering one entire side of the tape. The edges shall be clean, straight, and unbroken. The rolls shall be wound evenly. The finished product shall conform to the levels of quality established herein.

11. Sampling

11.1 *End Item Examination*—The lot size for visual inspection shall be as specified in the end item inspection of 6.3 of Practice D3715/D3715M. The sample unit shall be one roll.

11.2 *End Item Testing*—Lot size and sampling for end item testing shall be as specified in end item testing of 6.4 of Practice D3715/D3715M. The AQL shall be 4.0 %.

12. Specimen Preparation and Number of Tests

12.1 Specimen preparation shall be as specified in the appropriate test method.

12.2 Number of tests per unit of product shall be as specified in the appropriate test method.

12.3 *First Article of Manufacture*—When a product is first manufactured in a plant, it shall be tested and inspected to determine compliance with all examinations and tests of this specification. First article of manufacture examinations need only be repeated when there is a change in materials, processes, or plant of manufacture. Specimens shall consist of at least five rolls of tape representing a standard production lot.

13. Test Methods

13.1 *Responsibility for Inspection*—Unless otherwise specified in the contract or order, the manufacturer is responsible for the performance of all inspection requirements as specified herein.

13.2 *Responsibility for Compliance*—All items must meet all requirements of Sections 7 – 16. The inspections set forth in this specification shall become part of the manufacturer's overall inspection system or quality program for the contract or order. The absence of any inspection requirements in the specification shall not relieve the manufacturer of the responsibility of ensuring that all products or supplies submitted for acceptance comply with all the requirements of the contract or