



Designation: D6788 – 24

# Standard Specification for Repositionable Pressure-Sensitive Flags<sup>1</sup>

This standard is issued under the fixed designation D6788; 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 repositionable pressure-sensitive flags used to mark, flag, and index documents, books, periodicals, and so forth.

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 14, 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:*<sup>2</sup>

D996 Terminology of Packaging and Distribution Environments

D3330/D3330M Test Method for Peel Adhesion of Pressure-Sensitive Tape

D3652/D3652M Test Method for Thickness of Pressure-Sensitive Tapes

D3715/D3715M Practice for Quality Assurance of Pressure-Sensitive Tapes

D3811/D3811M Test Method for Unwind Force of Pressure-Sensitive Tapes

<sup>1</sup> 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.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

D3951 Practice for Commercial Packaging

D4332 Practice for Conditioning Containers, Packages, or Packaging Components for Testing

2.2 *ISO Standard:*

ISO 9002 Quality Systems Model for Quality Assurance in Production and Installation<sup>3</sup>

2.3 *ANSI/ASQC Standard:*

ANSI/ASQC Z 1.9 Sampling and Tables for Inspection by Variables for Percent Defective<sup>3</sup>

## 3. Terminology

3.1 *Definitions*—General terms in this specification are defined in Terminology D996.

3.2 *pad of flags, n*—a vertical stack of individual flags with one flag positioned on top of the other.

## 4. Significance and Use

4.1 The repositionable, pressure-sensitive flags covered by this specification are intended for marking, flagging, and indexing of documents, books, periodicals, and so forth. Flags consist of a single sheet of matte film partially covered by adhesive. There is a non-adhesive tab or section at one end of the flag for easy removal from surfaces. The flag is removable from most surfaces including paper. Flags may have a printed message on the top side of the flag.

## 5. Classification

5.1 Type 1 flags are 1 in. wide (25 mm) and have a colored tab at one end.

5.2 Type 2 flags are 1 in. wide (25 mm) and have a printed message on the top side of the flag.

5.3 Type 3 flags are 2 in. wide (50 mm) and have a white tab at one end to highlight writing.

5.4 Type 4 flags are ½ in. wide (12 mm) and have a colored tab at one end.

5.5 Type 5 flags are ½ in. wide (12 mm) and have an arrow or a message printed on the top side of the flag.

<sup>3</sup> 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 Number of flags in each dispenser,

6.1.4 Color of tab on flag for unprinted flags,

6.1.5 Printed message, if any, and

6.1.6 When testing and inspection certification is required (see Section 17).

## 7. Materials and Manufacture

7.1 The materials used in construction of the flags shall conform to the requirements of this specification.

7.2 *Backing*—The film backing shall consist of polyester, polypropylene, or polyethylene film. The backing shall have sufficient strength to resist tearing by hand. The backing shall have a transparent matte surface on one side that is writable by pens and pencils.

7.2.1 Writing on the flags shall not exhibit feathering, spreading, skipping, beading, visible discontinuities or fading of ink when writing with any writing instrument including a metal roller pen, felt tip pen, permanent marker, ball point pen, or fountain pen.

7.2.2 Individual flags shall release easily from the pad without leaving any trace of adhesive on the underlying sheet.

7.3 *Adhesive*—The adhesive shall be pressure-sensitive, repositionable, and water-insoluble. Each flag in the pad shall have a coating of the adhesive on the back side of the flag.

7.3.1 The adhesive coating shall be applied flush to one horizontal edge of the flag and shall extend the entire width of the flag. The adhesive shall cover at least 60 % of the surface area of the flag to ensure secure holding of the flag to a surface.

7.3.2 The adhesive shall leave no visible residue on the surface to which it is applied and removed. Removal of the flag from paper shall not rip or damage the paper.

7.4 *Pad and Dispenser*—Single flags shall be stacked in a pad. The pad of flags shall be contained in a dispenser package that allows single flag dispensing through a slot in the dispenser. The dispenser shall be designed so that when a flag is removed for use, the next flag in the pad shall protrude from the slot for the next application. This shall continue until the pad is consumed. The dispenser shall be of sufficient strength to last the life of the pad. One flag dispenser may contain a single pad or several pads of flags.

## 8. Conditioning

8.1 Condition all samples in the standard conditioning atmosphere as described in Practice D4332 for a period of not less than 24 h before testing.

8.2 Conduct tests in an atmosphere of 50 %  $\pm$  2 % relative humidity and 23.0 °C  $\pm$  2.0 °C as described in Practice D4332.

## 9. Physical Properties

9.1 The flags shall comply with the physical test requirements listed in Table 1.

TABLE 1 Properties

| Property         | Unit, Limit   | Value |
|------------------|---------------|-------|
| Adhesion, min    | Oz/in.        | 1.7   |
|                  | N/100 mm      | 1.9   |
| Adhesion, max    | Oz/in.        | 4.3   |
|                  | N/100 mm      | 4.8   |
| Dispensing Force | Oz/in., max   | 12.0  |
|                  | N/100 mm, max | 13.3  |
| Thickness        | in., min      | 0.002 |
|                  | mm, min       | 0.05  |

## 10. Dimensions, Mass, and Permissible Variations

10.1 The dimensions of the flags shall be as specified in Table 2.

10.2 *Color Tab Width*—Type 1, 3, and 4 flags have a color tab at the non-adhesive end of the flag. The length of the color tab shall be  $\frac{5}{8}$  in. (16 mm). The tolerance on color tab length shall be  $\pm \frac{1}{16}$  in. ( $\pm 1.5$  mm). The colored tab shall extend the full width of the flag.

## 11. Workmanship

11.1 The flags and the dispenser shall be clean and free from dirt, foreign matter, holes, tears, wrinkles, and other defects that might affect appearance or serviceability. Flags shall be uniform in color and formation. The finished product shall conform to the levels of quality established herein.

## 12. Sampling

12.1 *End Item Examination*—The lot size for visual inspection shall be as specified in the end item inspection of 5.3 of Practice D3715/D3715M. The sample unit shall be one pad of flags. The AQL shall be 2.5 %.

12.2 *End Item Testing*—Lot size and sampling for end item testing shall be as specified in end item testing of 5.4 of Practice D3715/D3715M. The sample unit shall be one pad of flags. The AQL shall be 4.0 %.

12.2.1 Adhesion has a double specification limit (there is an upper and lower limit to the specification). For adhesion, use Table C-3 and Example C-3 of ANSI/ASQC Z 1.9.

## 13. Specimen Preparation and Number of Tests

13.1 Specimen preparation shall be as specified in Section 14.

13.2 Number of tests per unit of product shall be four. The sample unit shall be one pad of flags.

## 14. Test Methods

14.1 *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.

TABLE 2 Dimensions

| Type | Description                 | Width            | Length           | Tolerance                              |
|------|-----------------------------|------------------|------------------|----------------------------------------|
| 1    | 1 in. unprinted             | 1 in. (25 mm)    | 1.72 in. (44 mm) | $\pm \frac{1}{16}$ in. ( $\pm 1.5$ mm) |
| 2    | 1 in. printed               | 1 in. (25 mm)    | 1.72 in. (44 mm) | $\pm \frac{1}{16}$ in. ( $\pm 1.5$ mm) |
| 3    | 2 in. index                 | 2 in. (50 mm)    | 1.72 in. (44 mm) | $\pm \frac{1}{16}$ in. ( $\pm 1.5$ mm) |
| 4    | $\frac{1}{2}$ in. unprinted | 0.47 in. (12 mm) | 1.72 in. (44 mm) | $\pm \frac{1}{16}$ in. ( $\pm 1.5$ mm) |
| 5    | $\frac{1}{2}$ in. printed   | 0.47 in. (12 mm) | 1.72 in. (44 mm) | $\pm \frac{1}{16}$ in. ( $\pm 1.5$ mm) |