



Standard Test Methods for Release Papers Used with Preformed Tape Sealants¹

This standard is issued under the fixed designation C 879; 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 These test methods cover laboratory procedures for evaluating the release characteristics of a release paper intended to be supplied in direct contact with a preformed tape sealant.

1.2 The values stated in metric (SI) units are to be regarded as the standard. The values given in parentheses are provided for information purposes only.

1.3 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standard:*

C 717 Terminology of Building Seals and Sealants²

3. Terminology

3.1 *Definitions*—The definitions of the following terms used in this test method are found in Terminology C 717: preformed tape sealant, sealant.

4. Summary of Test Method

4.1 The preformed tape sealant is placed between two strips of release paper supplied with the preformed tape sealant. Duplicate samples are rolled with a standard roller. One sample is heat aged in an oven, the other is heat aged in a humidity chamber. The release paper is peeled off of the preformed tape sealant either at ambient or elevated temperature. The release paper is examined for transfer or residue of the preformed tape sealant.

5. Significance and Use

5.1 Preformed tape sealants are tacky, deformable solids that are used under compression between two substrates in various sealing applications. These tapes are usually supplied in roll form with a release paper interlayer. When the roll is unwound and the release paper is removed from the preformed tape sealant, there should be no transfer of the preformed tape sealant to the release paper, nor any residue left on the paper. These methods will give a qualitative indication of whether or not the release paper can be

removed cleanly from a preformed tape sealant after a controlled exposure period.

5.2 Alternative procedures are listed because some preformed tape sealants are normally used under field conditions where elevated temperatures can be encountered, while other preformed tape sealants are normally used under more controlled environments in “assembly line” operations.

6. Apparatus and Accessory Materials

6.1 *Hard Rubber Roller*, weighing 2043 g (4.5 lbs) with approximate dimensions of 82.5 mm (3.25 in.) diameter and 63.5 mm (2.5 in.) width. The rubber surface is 6.4 mm (0.25 in.) thick and has a durometer hardness value of 75 ± 5 .

6.2 *Oven*, forced draft, set at $70 \pm 2^\circ\text{C}$ ($158 \pm 3.5^\circ\text{F}$) or $50 \pm 2^\circ\text{C}$ ($122 \pm 3.5^\circ\text{F}$).

6.3 *Humidity Chamber*, set at $41 \pm 2^\circ\text{C}$ ($105 \pm 3.5^\circ\text{F}$) and 100 +0, -2 % relative humidity.

6.4 *Weight*, 1000 g (2.2 lbs).

7. Sampling

7.1 Samples to be tested shall be taken from a fresh roll of preformed tape sealant, after first removing and discarding approximately the first 600 mm (2 ft) of the roll.

8. Test Specimens

8.1 Prepare two test specimens as follows:

8.1.1 Place a 152 mm (6 in.) length of preformed tape sealant between two strips of release paper that is supplied with the preformed tape sealant. Apply light finger pressure on the release papers to ensure alignment of the preformed tape sealant.

8.1.2 Pass the 2043 g roller over the length of the preformed tape sealant sample three times to ensure adequate contact.

9. Conditioning

9.1 Condition one test specimen for 14 days at $70 \pm 2^\circ\text{C}$ ($158 \pm 3.5^\circ\text{F}$) in a forced draft oven.

9.1.1 Condition the duplicate specimen for 14 days at $41 \pm 2^\circ\text{C}$ ($105 \pm 3.5^\circ\text{F}$) and 100 +0, -2 % relative humidity in a constant humidity chamber.

9.2 Remove the specimens and allow them to condition for 1 h at $23 \pm 2^\circ\text{C}$ ($73.4 \pm 3.6^\circ\text{F}$) and 50 ± 10 % relative humidity.

10. Procedures

10.1 *Alternative A, Ambient Temperature Testing*—Lift approximately 25 mm (1 in.) of the release paper from each side of the 152 mm (6 in.) length of preformed tape sealant specimen at one end and fold back 180° . Place the 1000 g (2.2 lb) weight on the exposed portion of the tape to hold it

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² *Annual Book of ASTM Standards*, Vol 04.07.

in place while the two strips of release paper are simultaneously peeled from the preformed tape sealant compound at an angle as close as practical to 180° to the preformed tape sealant surface (see Fig. 1).

10.2 *Alternative B, Elevated Temperature Testing*—Place both specimens in a forced draft oven set at $50 \pm 2^\circ\text{C}$ ($122 \pm 3.6^\circ\text{F}$). After 1 h while still in the oven at 50°C (122°F), perform the release paper peeling procedure described in 7.1.

10.3 Visually examine the specimens for transfer or residue of the tape compound to the release paper.

11. Report

11.1 Report the following information:

11.1.1 Identification of the preformed tape sealant, that is, the name, lot number and any other identifying characteristics.

11.1.2 The alternative procedure used and the test temperature.

11.1.3 If any transfer or residue of preformed tape sealant is observed.

12. Precision and Bias

12.1 Three round robins were conducted using Alternative Procedure A. Different laboratories showed excellent comparative results when evaluating a wide variety of tapes supplied with different release papers. One test was conducted using Alternative Procedure B and again a good correlation of results was obtained.

13. Keywords

13.1 preformed tape sealant; release paper; tape sealants; tapes

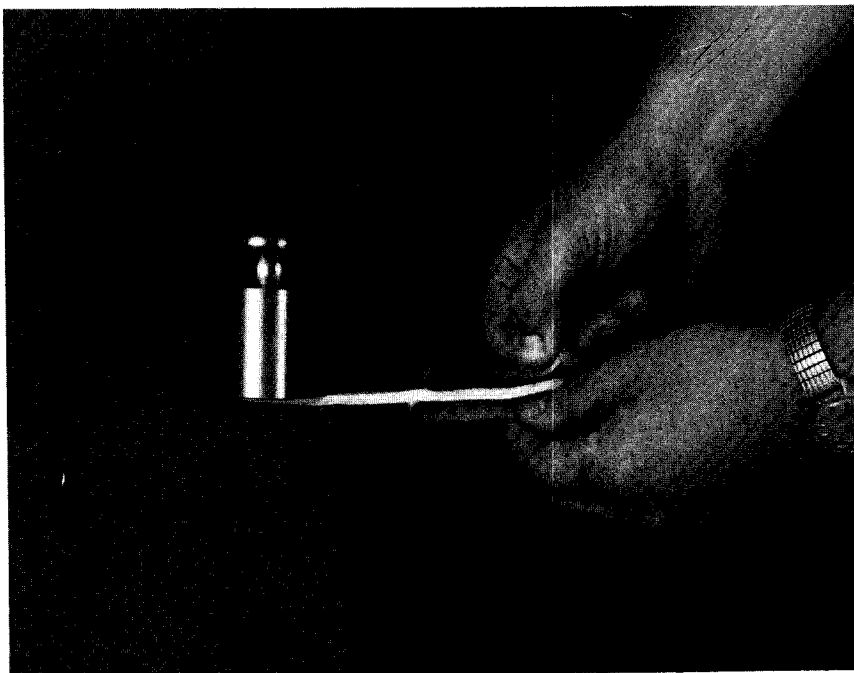


FIG. 1 Release Paper Peeling Procedure

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