



Standard Test Method for Softness of Preformed Tape Sealants¹

This standard is issued under the fixed designation C 782; 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 test method describes a laboratory procedure for determining the softness of preformed tape sealants.

NOTE 1—Cone penetration methods applicable to greases and to petrolatum are described in Test Methods D 217 and D 937. Test Method D 2451 also uses a penetration technique for determining the degree of set in sash glazing compounds.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parenthesis are for information only.

1.3 The subcommittee with jurisdiction is not aware of any similar ISO standard.

1.4 *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 Standards:

C 717 Terminology of Building Seals and Sealants²

D 5 Test Method for Penetration of Bituminous Materials³

D 217 Test Method for Cone Penetration of Lubricating Grease⁴

D 937 Test Method for Cone Penetration of Petrolatum³

D 1321 Test Method for Needle Penetration of Petroleum Waxes⁴

D 2451 Test Method for Degree of Set for Glazing Compounds on Metal Sash²

E 1 Specification for ASTM Thermometers⁵

3. Terminology

3.1 Definitions—The definition of the following term used in this test method is found in Terminology C 717: preformed tape sealant.

4. Summary of Test Method

4.1 The preformed tape sealant specimen is allowed to equilibrate at standard conditions. A standard needle under a defined load is placed on the specimen for 5 s. The penetration of the needle into the preformed tape sealant is measured. Multiple readings are recorded and averaged.

5. Significance and Use

5.1 Preformed tape sealants are tacky, deformable solids that are used under compression between two substrates in a variety of sealing applications. This procedure measures the softness of a preformed tape sealant and gives an indication of the preformed tape sealant's ease of compression during installation. The resistance to penetration may also give an indication of the toughness of the preformed tape sealant.

6. Apparatus

6.1 *Needle Penetrometer*, as described in Test Method D 5, with a certified needle.

NOTE 2—Test Method D 5 describes the needle method for determining the penetration of bituminous material; Test Method D 1321 describes a similar method for use with petroleum waxes, but a different needle is used.

6.2 *Stop Watch or Timing Mechanism*, for the penetrometer.

6.3 *Thermometer*, to measure the temperature of the test specimen in the vicinity of the temperature of the test. For tests at $23 \pm 0.5^\circ\text{C}$ ($73 \pm 1^\circ\text{F}$) a thermometer conforming to the requirements prescribed in Specification E 1 is recommended, such as ASTM Saybolt Viscosity Thermometer 17C (or 17F) having a range from 19 to 27°C (66 to 80°F).

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.

7.2 Remove release paper as required in order to fashion a suitable test specimen.

8. Test Specimen

8.1 Prepare a test specimen by cutting short lengths of preformed tape sealant and plying them together to form a solid block no smaller than 13 mm (0.5 in) wide by 13 mm (0.5 in) by 25 mm (1.0 in) long.

¹ This test method is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.20 on General Sealant Standards.

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

³ *Annual Book of ASTM Standards*, Vol 04.03.

⁴ *Annual Book of ASTM Standards*, Vol 05.01.

⁵ *Annual Book of ASTM Standards*, Vol 14.03.