



Designation: C782 – 13 (Reapproved 2023)

Standard Test Method for Softness of Preformed Tape Sealants¹

This standard is issued under the fixed designation C782; 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 D217 and D937. Test Method D2451 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 standard. Temperature values are also provided (in parentheses) in degrees Fahrenheit.

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

1.5 *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

C717 Terminology of Building Seals and Sealants

D5 Test Method for Penetration of Bituminous Materials

D217 Test Methods for Cone Penetration of Lubricating Grease

D937 Test Method for Cone Penetration of Petrolatum

D1321 Test Method for Needle Penetration of Petroleum Waxes

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 Test Methods.

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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.

D2451 Test Method for Degree of Set for Glazing Compounds on Metal Sash (Withdrawn 2002)³

E2251 Specification for Liquid-in-Glass ASTM Thermometers with Low-Hazard Precision Liquids

3. Terminology

3.1 *Definitions*—The definition of the following term used in this test method is found in Terminology C717: 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 D5, with a certified needle.

NOTE 2—Test Method D5 describes the needle method for determining the penetration of bituminous material; Test Method D1321 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 $23\text{ }^{\circ}\text{C} \pm 0.5\text{ }^{\circ}\text{C}$ ($73\text{ }^{\circ}\text{F} \pm 1\text{ }^{\circ}\text{F}$) a thermometer conforming to the requirements prescribed in Specification E2251 is recommended, such as ASTM Saybolt Viscosity Thermometer 17C (or 17F) having a range from $19\text{ }^{\circ}\text{C}$ to $27\text{ }^{\circ}\text{C}$ ($66\text{ }^{\circ}\text{F}$ to $80\text{ }^{\circ}\text{F}$).

³ The last approved version of this historical standard is referenced on www.astm.org.