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.

Designation: D2377 – 14 (Reapproved 2019)

Standard Test Method for Tack-Free Time of Caulking Compounds and Sealants[1]

This standard is issued under the fixed designation D2377; 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 the determination of the tack-free time property of caulking compounds and sealants. This test method is applicable to both gun and knife grades.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 The committee with jurisdiction over this standard is not aware of any comparable standard published by other organizations.

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

3. Terminology

3.1 *Definitions*—Refer to Terminology C717 for definitions of the following terms: caulking compound, compound, sealant.

4. Apparatus

4.1 *Cabinet or Room,* capable of maintaining Standard Conditions as defined in Terminology C717.

4.2 *Brass Sheet,* ¾ by 1½ in. (19 by 38 mm), approximately ¼ in. (6.4 mm) thick.

4.3 *Template*—A rectangular template of steel or brass, ⅛ in. (3.2 mm) thick, 1 by 3¾ in. (25.4 by 95.1 mm) inside, and approximately 2 by 4¾ in. (51 by 121 mm) outside.

4.4 *Steel Sheets*—Two rectangular tin-plated steel sheets, approximately 3 by 5 in. (76 by 127 mm), and of a convenient thickness.

4.5 *Plastic Strips*—Two, clear, low-density polyethylene strips, 1 by 5 in. (25.4 by 127 mm) by 0.004 ± 0.001 in. (0.1016 ± 0.0254 mm) thick.

4.6 *Spatula,* steel, having a 4 to 5-in. (102 to 127-mm) long narrow blade.

4.7 *Thin Knife Blade.*

5. Solvent

5.1 *Methyl Ethyl Ketone, Ethylene Dichloride,* or similar solvent.

6. Conditioning

6.1 Condition the sample in the original closed container for at least 5 h at Standard Conditions as defined in Terminology C717.

7. Sampling

7.1 Take the sealant from a previously unopened container and thoroughly mix before using.

8. Test Specimens

8.1 Prepare two test specimens as follows:

8.1.1 Thoroughly mix the conditioned compound and completely clean the template and steel sheets with solvent.

8.1.2 Center the template on the tin panel and carefully fill it, avoiding air pockets. Strike off the surface of the compound flat to a uniform ⅛-in. (3.2-mm) thickness. With a thin knife blade, cut all around the outside edge of the compound and lift the template straight up and off.

9. Procedure(Fig. 1)

9.1 For gun grade compounds, expose the specimen for 72 h at Standard Conditions as defined in Terminology C717. For knife grade compounds, expose for 120 h under the same conditions.

[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.

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