



Designation: C661 – 15 (Reapproved 2022)

Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer¹

This standard is issued under the fixed designation C661; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This test method describes a laboratory procedure for determining indentation hardness of joint sealing compounds (single- and multicomponent) intended for use in building construction.

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

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

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

D2240 Test Method for Rubber Property—Durometer Hardness

3. Terminology

3.1 **Definitions**—See Terminology **C717** for applicable definitions of the following terms: compound; elastomeric; hard-

ness; joint; sealant, non-sag; sealant, self-leveling, and standard conditions.

4. Significance and Use

4.1 The results obtained by this test method are simply a measure of the indentation into the sealant material of the indenter under load; they are not generally considered a measure of abrasion or wear resistance of the sealant.

5. Apparatus

5.1 *Durometer, Type A-2*, with a dial graduated in units from 0 to 100. (See Test Method **D2240** for a description of the indenter and a method of calibration of the durometer.)

5.2 *Rectangular Brass Frame*, with inside dimensions 130 mm by 40 mm by 6 mm (approximately 5 in. by 1½ in. by ¼ in.).

5.3 *Aluminum Plates*, two 16 gauge to 24 gauge, 80 mm by 150 mm (approximately 3 in. by 6 in.).

5.4 *Thin-Bladed Knife*.

5.5 *Chamber*, capable of maintaining 38 °C ± 2 °C (100 °F ± 3.5 °F) and 95 % relative humidity.

5.6 *Metal Straightedge*.

6. Standard Test Conditions

6.1 Unless otherwise specified by those authorizing the tests, testing is conducted under standard conditions as defined in Terminology **C717**.

7. Procedure

7.1 *Test for Hardness of Multicomponent Sealants:*

7.1.1 Condition at least 250 g of base compound and appropriate amounts of curing agent for at least 24 h at standard conditions; then mix the components thoroughly for 5 min.

7.1.2 Fill the brass frame, after centering it on the aluminum plate, with a portion of the conditioned compound and strike it off flat with a metal straightedge. Lift the frame from the sealant after separating it by running a thin-bladed knife along the inside of the frame. Prepare two such specimens and cure them for 14 days at standard 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.