



Designation: C 1083 – 00

Standard Test Method for Water Absorption of Cellular Elastomeric Gaskets and Sealing Materials¹

This standard is issued under the fixed designation C 1083; 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 covers those cellular elastomeric compounds that are manufactured in preformed shapes such as gaskets, and that are used as compression seals for glazing purposes and as sealing materials in other applications in building construction.

1.2 *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.*

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

2. Referenced Documents

2.1 *ASTM Standards:*

C 717 Terminology of Building Seals and Sealants²

D 3182 Practice for Rubber—Materials, Equipment, and Procedures for Mixing Standard Compounds and Preparing Standard Vulcanized Sheets³

3. Terminology

3.1 Definitions—Refer to Terminology C 717 for the following terms used in this test method: cell, compound, compression gasket, elastomer, elastomeric, gasket, glazing, seal, and sealing material.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *cellular elastomer, n*—in building construction, a cured elastomeric material containing cells or small voids.

4. Significance and Use

4.1 This test method will quantify the water absorption characteristics of cellular elastomeric gaskets and sealing

materials. It is a test that enables the specifier to exercise engineering judgment in the selection of materials.

5. Apparatus

5.1 *Vessel*, of potable water of dimensions appropriate to permit proper submergence of the specimens as described in Section 9.

5.2 *Stand and Clamps*, to hold specimens.

5.3 *Balance*, triple-beam, accurate to 0.01 g.

5.4 *Paper*, lint-free blotting.

6. Comparison to Other Standards

6.1 The ASTM Committee with jurisdiction over this standard¹ is not aware of any comparable standards published by other organizations.

7. Sampling and Test Specimens

7.1 *Sampling:*

7.1.1 When possible, the manufactured product or a suitable section thereof shall be used for the test. Representative samples of the lot being examined shall be selected at random.

7.1.2 When the manufactured product does not lend itself to testing or to the taking of test specimens because of complicated shape, small size, metal or fabric inserts, or other reasons, standard test strips shall be prepared. The standard specimens for testing shall be as specified in 7.2.2.

7.1.3 The manufacturer shall, upon the request of the purchaser at the time of ordering, furnish sufficient test specimens prepared in accordance with Practice D 3182.

7.2 *Test Specimens:*

7.2.1 The test specimen shall be 460 mm (18 in.) long.

7.2.2 Test specimens that are to be prepared as described by 7.1.2 shall be 460 mm (18 in.) long, 13 mm (½ in.) thick, and 25 mm (1 in.) wide.

7.2.3 All test specimens shall be made from the same compound and shall have the same apparent density and state of cure as the product they represent.

7.2.4 This test method requires ten test specimens.

8. Conditioning

8.1 Condition all test specimens at $21.1 \pm 1.1^\circ\text{C}$ ($70 \pm 2^\circ\text{F}$) for at least 24 h prior to testing.

¹ This test method is under the jurisdiction of ASTM Committee C-24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.73 on Compression Seal and Lock-Strip Gaskets.

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

³ *Annual Book of ASTM Standards*, Vol 09.01.