~~Designation:C736–00(Reapproved2006)ε1~~ Designation: C736 – 12

Standard Test Method for Extension-Recovery and Adhesion of Latex Sealants[1]

This standard is issued under the fixed designation C736; 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.

~~ε[1] NOTE—Section 3.1 was updated editorially in May 2006.~~

1. Scope

1.1 This test method covers a laboratory procedure for the determination of the extension-recovery and adhesion of latex sealants.

1.2 The values stated in SI (metric) units are to be regarded as the standard. The values given in parentheses are provided 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 and health practices and determine the applicability of regulatory limitations prior to use.*

NOTE 1—A related ISO standard is ISO 7389. Users should compare to determine how the ISO standard differs from this test method.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

C717 Terminology of Building Seals and Sealants

C1375 Guide for Substrates Used in Testing Building Seals and Sealants

2.2 *ISO Standard:*[3]

ISO 7389 Building Construction–Sealants–Determination of Elastic Recovery

3. Terminology

3.1 *Definitions*—Refer to Terminology C717 for definitions of the terms used in this test method.

4. Summary of Test Method

4.1 A joint of prescribed dimensions, between glass and aluminum plates is filled with the sealant. After an aging period, the joint width is increased 25 %, the force is removed, and the specimen is permitted to recover. The amount of recovery and the percent of adhesion loss are measured.

5. Significance and Use

5.1 This test method evaluates the performance of a latex sealant in joints subjected to a limited amount of extension.

6. Apparatus

6.1 *Extension Machine* that can be operated at a steady rate of 12.7 mm/min (0.5 in./min) and held at constant extension for 5 min.

6.2 *Aluminum Alloy Plates*, six, anodized, 6.4 by 25.4 by 76.2 mm (¼ by 1 by 3 in.). Plates shall conform to Guide C1375.

6.3 *Glass Plates*, six, 6.4 by 25.4 by 76.2 mm (¼ by 1 by 3 in.). Plates shall conform to Guide C1375.

6.4 *U Shaped Spacers*, six, as shown in Fig. 1(*a*) made of a rigid, nonadhering material such as polyethylene, TFE-fluorocarbon, or release-covered metal.

6.5 *Metal C Clamps*, twelve.

6.6 *Circulating Air Oven*, capable of maintaining 50 ± 1°C (122 ± 2°F).

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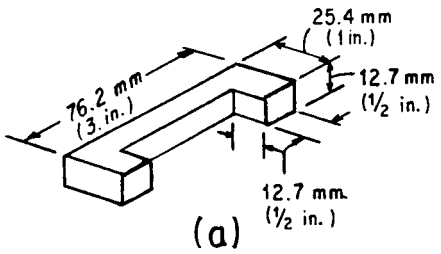
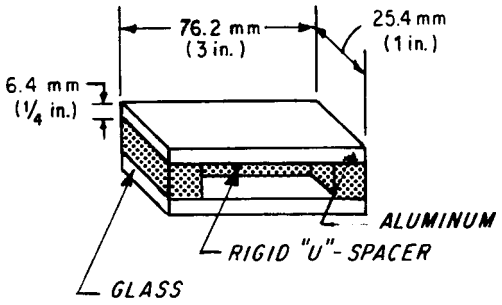
[1] This test method is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is the direct responsibility of Subcommittee ~~C24.30~~ C24.20 on ~~Adhesion.~~ General Test Methods.

Current edition approved ~~May~~June 1, ~~2006.~~2012. Published ~~May 2006.~~June 2012. Originally approved in 1972. Last previous edition approved in ~~2000~~2006 as C736 – 00(2006)ε[1]. DOI: ~~10.1520/C0736-00R06E01.~~10.1520/C0736-12.

[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.

[3] Available from the American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.





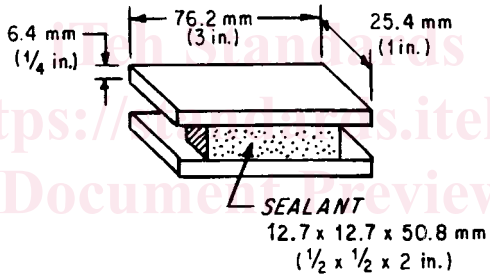


FIG. 1 Preparation of Test Specimen

TABLE 1 Precision and Bias Data—Percent Recovery

Material	Average Recovery, %	Estimated Standard Deviation (Within Laboratory)	Estimated Standard Deviation (Between Laboratory)	Repeatability (Internal)	Reproducibility
G1	100.00	0.00	0.00	0.00	0.00
G2	91.67	14.43	20.41	40.85	57.77
G3	100.00	0.00	0.00	0.00	0.00

TABLE 2 Precision and Bias Data—Percent Adhesion Loss

Material	Average Adhesion Loss, %	Estimated Standard Deviation (Within Laboratory)	Estimated Standard Deviation (Between Laboratory)	Repeatability (Internal)	Reproducibility
G1	8.084	20.29	20.29	57.41	57.41
G2	0.001	0.00	0.00	0.00	0.00
G3	0.001	0.00	0.00	0.00	0.00

7. Sampling

7.1 Take the sealant to be tested directly from the container as commercially supplied by the manufacturer.