Designation: C731 – 15

Standard Test Method for Extrudability, After Package Aging, of Latex Sealants[1]

This standard is issued under the fixed designation C731; 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 a laboratory procedure for the determination of extrudability of latex sealants after freeze-thaw and heat cycling.

1.2 The values stated in metric (SI) 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 problems, 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—Currently there is no ISO standard similar to this test method.

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 used in this test method: latex sealant, sealant, standard conditions.

4. Summary of Test Method

4.1 After being subjected to 5 freeze-thaw cycles followed by 7 days of heat aging, the sealant is extruded under pressure from an air-powered caulking gun, and the extrudability is measured in grams per second.

5. Significance and Use

5.1 Extrudability measurements of latex sealants serve to indicate only their ease of application; they do not predict the performance capability of the compound after installation.

5.2 This test method also measures freeze-thaw and heat stability of such sealants.

6. Apparatus

6.1 *Caulking Gun,* air-powdered.

6.2 *Polyethylene Cartridge,* 6 fluid oz. and plunger.

6.3 *Polyethylene Cartridge Nozzle,* 64 mm (2½ in.) in length with 3-mm (⅛-in.) orifice.

6.4 *Air Compressor,* capable of producing 0.34 MPa (50 psi).

6.5 *Freezer,* capable of maintaining – 17 ± 1°C (0 ± 2°F).

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

6.7 *Stop Watch,* standard laboratory.

6.8 *Analytical Balance,* accurate to 1 g.

6.9 *Jar,* approximately 0.5 L (1-pt).

6.10 *Spatula.*

7. Sampling

7.1 After conditioning as specified in 8.1, take the sealant to be tested directly from a container as commercially supplied by the manufacturer.

8. Conditioning

8.1 Subject the sealant in its original container to 5 freeze-thaw cycles, each cycle consisting of 16 h at – 17± 1°C (0 ± 2°F) and 8 h at 23 ± 1°C (73.4± 2°F), followed by 7 days at 50 ± 1°C (122 ± 2°F).

8.2 Condition the sealant which is still in its original container, for a minimum of 5 days at standard conditions.

8.3 Condition the polyethylene cartridge for a minimum of 16 h at standard conditions.

9. Procedure

9.1 After conditioning, transfer the sealant from its container into the polyethylene cartridge either by gunning or with the spatula. Avoid trapping air in the sealant during transfer.

9.2 Place the filled cartridge in the air-powered caulking gun and attach the cartridge nozzle.

[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.