



Standard Test Method for Measuring the Yield for Aerosol Foam Sealants¹

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1. Scope

1.1 This test method determines the quantity of linear units of a foam sealant having a specified bead diameter that may be obtained from a single can of aerosol product. Four (4) cans are required for each product determination.

1.2 The test method is intended to estimate the contents of the aerosol container (1) for purposes of label statements, and (2) to provide the user information needed to estimate job requirements.

1.3 Foam sealants are used for a variety of end-use applications but are primarily intended to reduce air movement in the building envelope.

1.4 Currently, two main foam sealant types are applicable to this standard: single component polyurethane and latex.

1.5 There is no other known standard test method to measure aerosol foam sealant yield.

1.6 Values are reported in SI units only. Certain apparatus and supply items are referenced in inch-pound units for purchasing purposes.

1.7 *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.*

2. Referenced Documents

2.1 *ASTM Standards:*²

C717 Terminology of Building Seals and Sealants

C1620 Specification for Aerosol Polyurethane and Aerosol Latex Foam Sealants

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

¹ This test method is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.61 on Aerosol Foam Sealants.

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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.

3.1.1 *empty aerosol can (of foam sealant)*—the time at which the product flow of the foam sealant is less than 2.0 linear cm or 1.0 g of continuous foam bead during two continuous seconds of dispensing.

3.1.2 *symbols*—letter symbols are used to represent physical measurements and are defined in Table 1 and Table 2.

3.1.3 *yield*—the yield for an aerosol can of foam sealant is the quantity of a specified nominal diameter of foam bead that is dispensed from a full can as defined by this test method.

4. Summary of Test Method

4.1 *Procedure A*—Suitable for foams that can be measured by water displacement (intended only for polyurethane foams).

4.1.1 The middle of the aerosol can's contents is dispensed at specified bead size segments.

4.1.2 The dispensed foam volume is determined by submerging the foam bead segments in water and measuring the weight of the displaced water.

4.1.3 The yield (defined as the total bead length of a specified nominal bead diameter of cured foam per can) is calculated from the measured foam volume.

4.2 *Procedure B*—Suitable only for foam sealants that cannot be measured by water displacement (Intended only for latex foams).

4.2.1 The middle of the container's contents is dispensed as a specified bead size segments.

4.2.2 The volume of the foam bead is directly measured from the dried or cured foam bead segments by direct measurement. Yield is calculated from these measurements.

NOTE 1—Procedure A uses tap water (see 11.10) to which 4.2 g of Dioctyl Sodium Sulfosuccinate (70 % solids) and 1.2 g of SAG 10 defoamer per 4 litres may be added as wetting agent/defoamer blend. This avoids false readings if air bubbles become a problem. The water is maintained at $23 \pm 2^\circ\text{C}$ during the submersion part of the test. It is permissible for a single batch of water to be used up to 48 h.

5. Significance and Use

5.1 The yield measurement of aerosol foam sealants is used to indicate the amount of foam sealant that can be obtained from a single can of product.

5.2 The yield does not predict the performance capability of the foam sealant product or its suitability for the intended application.