



Standard Test Method for Measuring the Yield for Aerosol Foam Sealants¹

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1. Scope

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

1.2 The 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 Such foam sealants are used for a variety of end use applications 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 types.

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

C 717 Terminology of Building Seals and Sealants

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *aerosol foam sealant*—foam sealant, which is dispensed from any aerosol can, pressure cylinder or container, intended to seal cracks or gaps.

3.1.2 *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.

3.1.3 *post dispensing contraction*—the decrease in the foam bead diameter or height that can occur immediately after initial foam sealant dispensing up to final curing or drying of the product.

3.1.4 *post dispensing expansion*—the increase in the foam bead diameter or height that occurs immediately after initial foam sealant dispensing up to final curing or drying of the product.

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

3.1.6 *yield*—the yield for an aerosol can of foam sealant is the quantity of a specified nominal diameter of foam bead which 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.

4.1.1 The middle 100 g of the aerosol can's contents is dispensed as a specified size of bead segments.

4.1.2 The dispensed foam volume is determined by measuring the volume of displaced water when the foam bead segments are submersed.

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 for foam sealants that cannot be measured by water displacement.

4.2.1 The middle 100 g of the container's contents is dispensed as a specified size of bead 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.

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.