Designation: C1737 – 23

Standard Guide for Evaluating Temperature Effects to Aerosol Foam Sealant During and After Dispensing[1]

This standard is issued under the fixed designation C1737; 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 guide covers the general effects of temperature from the aerosol foam sealant (either polyurethane or latex types) under the use temperatures.

1.2 The guide is intended to estimate the observed product dispensing characteristics and foam quality of aerosol foam dispensed or cured, or both, at specific temperatures and standard conditions.

1.3 Such foam sealants are primarily intended to reduce air movement in and out of building enclosures.

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

1.5 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.6 There are no other known test methods specific for measuring the product temperature range for aerosol foam sealant.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

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

C1806 Test Method for Measuring the Flow Rate of Aerosol Foam Sealants

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *cure temperature*—set temperature of the chamber where the foam sealant cures. Also called the ambient air temperature for purposes of this guide.

3.1.2 *flow rate*—see Test Method C1806.

3.1.3 *friability*—the property of a cured or semi-cured foamed cellular material which permanently deforms and crumbles after a light finger force is applied to the material surface.

3.1.4 *product temperature*—temperature of the foam sealant in its original container after 24 h at the manufacturer's recommended test temperature.

3.1.5 *product use temperature*—the aerosol can product temperature itself and the ambient air temperature during the cure.

3.1.6 *standard conditions*—see Terminology in C717.

3.1.7 *tack free time*—see Specification C1620.

4. Summary of Guide

4.1 *Procedure*—Select the desired temperatures to measure. A product for example could be tested at a product temperature of 5 °C, and a cure temperature (ambient air temperature) of 0 °C. This comprises the product use temperature.

[1] This guide 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.