



Standard Test Method for Determination of Installed Thickness of Pneumatically Applied Loose-Fill Building Insulation¹

This standard is issued under the fixed designation C1374; 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 determination of the installed thickness of pneumatically applied loose-fill building insulations prior to settling by simulating an open attic with horizontal blown applications.

1.2 This test method is a laboratory procedure for use by manufacturers of loose-fill insulation for product design, label development, and quality control testing. The apparatus used produces installed thickness results at a given mass/unit area.

1.3 This test method is not the same as the design density procedures described in Test Methods C520 or Specifications C739 or C764.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *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

C168 Terminology Relating to Thermal Insulation

C520 Test Methods for Density of Granular Loose Fill Insulations

C739 Specification for Cellulosic Fiber Loose-Fill Thermal Insulation

C764 Specification for Mineral Fiber Loose-Fill Thermal Insulation

¹ This test method is under the jurisdiction of ASTM Committee C16 on Thermal Insulation and is the direct responsibility of Subcommittee C16.32 on Mechanical Properties.

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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.

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

3. Terminology

3.1 *Definitions*—Unless otherwise stated, the definitions listed in Terminology C168 are applicable herein.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *installed thickness, n* —the average thickness, as measured immediately after application of blown insulation material when applied at a given mass/unit area.

4. Summary of Test Method

4.1 A standardized test chamber of 80 ft² (7.4 m²) is used as a receptacle to receive a calculated mass/unit area of pneumatically applied insulation.

4.2 The mass of insulation to be blown into the test chamber is calculated from the bag label information.

4.3 The mass of insulation prescribed in 4.2 is uniformly blown into the test chamber.

4.4 The thickness of the blown insulation is determined at 13 predetermined locations.

4.5 The thickness average of three tests is the installed thickness for the mass/unit area being tested.

5. Significance and Use

5.1 This test method was designed to give the manufacturer of loose-fill insulation products a way of determining what the initial installed thickness should be in a horizontal open attic for pneumatic applications.

5.2 The installed thickness value developed by this test method is intended to provide guidance to the installer in order to achieve a minimum mass/unit area for a given R -value.

5.3 For the purpose of product design, testing should be done at a variety of R -values. At least three R -values should be used: the lowest R -value on the product label, the highest R -value on the product label, and an R -value near the midpoint of the R -value range.

NOTE 1—For quality control purposes, testing may be done at one R -value of $R-19$ (h $\times$ ft² $\times$ °F/Btu) or higher.