



Designation: **C1785—13 C1785 – 15**

Standard Test Method for Concentration of Pinhole Detections in Moisture Barriers on Metal Jacketing¹

This standard is issued under the fixed designation C1785; 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 the determination of the concentration of pinhole detections in a moisture barrier film or coating that is applied to the interior surface of metal jacketing.

1.2 Since this method relies on the completion through the metal jacketing of an electrical circuit, this method is only applicable to jacketing that is electrically conductive and has a moisture barrier applied which is not electrically conductive.

1.3 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.

1.4 *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](#)

[C1729 Specification for Aluminum Jacketing for Insulation](#)

[C1767 Specification for Stainless Steel Jacketing for Insulation](#)

3. Terminology

3.1 *Definitions*—Definitions in Terminology [C168](#) apply to terms used in this specification.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *continuous pinhole detection*—while the test is being conducted, a continuous sounding of the audible test equipment alarm over an area larger than the contact area of the cellulose sponge.

¹ This test method is under the jurisdiction of ASTM Committee [C16](#) on Thermal Insulation and is the direct responsibility of Subcommittee [C16.33](#) on Insulation Finishes and Moisture.

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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.

3.2.1.1 *Discussion*—

In some cases, large portions of one or more of the test areas (see [8.2.1](#)) or even all of one or more test areas will yield a continuous pinhole detection. This concept of a continuous pinhole detection and the area yielding this performance is necessary to quantify the number of pinhole detections in a sample exhibiting this phenomenon (see [9.2](#) and [9.3](#)).

3.2.2 *moisture barrier (moisture retarder)*—a layer of plastic film or other material applied to the inner side of metal jacketing to inhibit jacket corrosion by interfering with the formation of a galvanic cell between the dissimilar metals of the pipe and jacket or by preventing crevice or pitting corrosion.

3.2.3 *pinhole*—a hole completely through a moisture barrier typically too small to be seen by the eye.

3.2.4 *pinhole detection*—a single sounding of the audible test equipment alarm while the test is being conducted.