



Standard Practice for Field Determination of Substrate Water Absorption (Porosity) for Substrates to Receive Resilient Flooring¹

This standard is issued under the fixed designation F3191; 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 practice covers the determination of whether or not a substrate surface, in lieu of written instruction from a product manufacturer, is considered porous or non-porous prior to the installation of resilient flooring materials.

1.2 Although carpet tiles, carpet, wood flooring, coatings, films, paints, self-leveling and trowel-grade underlayments, primers, and other associated products are not specifically intended to be included in the category of resilient floor coverings, the procedures included in this practice may be useful for assessing the substrate water absorption for substrates to receive such materials.

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.* Some specific hazards statements are given in Section 6 on Hazards.

2. Referenced Documents

2.1 ASTM Standards:²

C125 Terminology Relating to Concrete and Concrete Aggregates

F141 Terminology Relating to Resilient Floor Coverings

F1869 Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

2.2 Carpet and Rug Institute (CRI) Standard:³

CRI Carpet Installation Standard

2.3 Resilient Floor Covering Institute (RFCI) Standards:⁴

Recommended Work Practices for Removal of Resilient Floor Coverings

Recommended Installation Practice for Homogenous Sheet Flooring, Fully-Adhered

3. Terminology

3.1 Definitions:

3.1.1 See Terminology **F141** for definitions of the terms: substrate, above-grade (suspended), on-grade, below grade, concrete, and resilient flooring.

3.1.2 See Test Method **F1869** for definition of service temperature and relative humidity.

3.1.3 See Terminology **C125** for definition of absorption.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *absorption, n*—the process by which a liquid is drawn into and tends to fill permeable pores in a porous solid body (Terminology **C125**).

3.2.2 *absorption rate, n*—critical factor in determining how to install many directly applied adhesives, determined by the amount of time necessary for one droplet of water to be absorbed with increasing length of time for absorption indicating a less absorptive, less porous, substrate surface.

4. Summary of Practice

4.1 This practice describes the procedure for assessing the substrate water absorption (often referred to as substrate porosity) of horizontal, substrate surfaces prior to the installation of resilient floor coverings. The procedure involves applying a drop of water to the surface of properly prepared substrate, and then determining whether that drop of water is absorbed within a given time period.

5. Significance and Use

5.1 The ability of a substrate surface to readily absorb water is a key indicator in determining how to correctly install many

¹ This practice is under the jurisdiction of ASTM Committee **F06** on Resilient Floor Coverings and is the direct responsibility of Subcommittee **F06.40** on Practices.

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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 Available from Carpet and Rug Institute, 100 S. Hamilton St., Dalton, GA 30720, <http://www.carpet-rug.org>.

⁴ Available from Resilient Floor Covering Institute, 115 Broad St., Suite 201, LaGrange, GA 30240, <http://www.rfci.com>.