



Designation: D4263 – 83 (Reapproved 2018)

# Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method<sup>1</sup>

This standard is issued under the fixed designation D4263; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the U.S. Department of Defense.*

## 1. Scope

1.1 This test method is used to indicate the presence of capillary moisture in concrete.

1.2 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.

1.3 *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.* For specific caution statements, see Section 4.

1.4 *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. Significance and Use

2.1 Capillary moisture in the concrete may be detrimental to the performance of certain coating systems that cannot tolerate moisture on or within the surface boundary.

2.2 This test method is used prior to the application of coatings on concrete.

## 3. Materials

3.1 *Transparent Polyethylene Sheet*, commercially available, approximately 4 mils (0.1 mm) thick.

3.2 *Adhesive Tape* that will adhere to the substrate. (Duct tape 2 in. (50 mm) wide is suggested.)

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D33 on Protective Coating and Lining Work for Power Generation Facilities and is the direct responsibility of Subcommittee D33.05 on Application and Surface Preparation.

Current edition approved Aug. 1, 2018. Published August 2018. Originally approved in 1983. Last previous edition approved in 2012 as D4263 – 83 (2012). DOI: 10.1520/D4263-83R18.

## 4. Cautions

4.1 This test method shall be conducted when the surface temperature and ambient conditions are within the established parameters for application of the coating system.

4.2 Avoid direct sunlight, direct heat, or damage to the plastic sheet, as such treatment affects the reliability of the results.

## 5. Procedure

5.1 Tape a segment of plastic sheet, approximately 18 by 18 in. (457 by 457 mm), tightly to the concrete surface making sure that all edges are sealed.

5.2 Allow the plastic sheet to remain in place a minimum of 16 h.

5.3 After the allowed time has elapsed, remove the plastic sheet and visually inspect the underside of the sheet and the concrete surface of the patch for the presence of moisture.

### 5.4 Sampling:

5.4.1 *Floors*—One test area per 500 ft<sup>2</sup> (46 m<sup>2</sup>) or portion thereof, of surface areas unless otherwise specified.

5.4.2 *Walls and Ceilings*—One test area per 500 ft<sup>2</sup> (46 m<sup>2</sup>) or portion thereof, of surface area unless otherwise specified.

5.4.3 The recommended practice is a minimum of one test for each 10 ft (3 m) of vertical rise in all elevation starting within 12 in. (300 mm) of the floor.

## 6. Report

6.1 Report the presence or absence of moisture.

## 7. Precision and Bias

7.1 This test method indicates the presence of capillary moisture. This method is purely qualitative. No precision or bias has been established for this test method.

## 8. Keywords

8.1 concrete; moisture