Designation: D2064 – 91 (Reapproved 2016)

Standard Test Method for Print Resistance of Architectural Paints[1]

This standard is issued under the fixed designation D2064; 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 an accelerated procedure for evaluating the print resistance of architectural paints. It differs from print resistance Test Method D2091 in that the latter is concerned with lacquer finishes under packaging, shipping, and warehousing conditions, whereas this test method is concerned with decorative coatings undergoing random on-site pressure contact.

NOTE 1—Printing should not be confused with blocking, which is measured in Test Method D4946. The former relates to the indentation of a surface, and the latter, the sticking together of two surfaces.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

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

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D2091 Test Method for Print Resistance of Lacquers

D4946 Test Method for Blocking Resistance of Architectural Paints

3. Terminology

3.1 *Definitions:*

3.1.1 *print resistance, n*—the ability of a paint film to resist forming a permanent impression in a semihardened film as a result of a pressure from an object placed on it.

3.2 For additional definitions of terms, refer to *Paint/Coatings Dictionary*.[3]

4. Summary of Test Method

4.1 A piece of cheesecloth is placed on the painted surface and topped with a No. 8 rubber stopper (position smaller diameter of stopper on the cheesecloth) and a 500-g weight to create a pressure of about 0.9 psi (6.2 kPa). This assembly is placed in a 140°F (60°C), or other agreed upon temperature, oven for 1 h. When cooled, the resulting paint surfaces are rated on the numerical scale of 0 to 10, which corresponds to a subjective rating of an impression resulting from their being in contact with the cheesecloth.

5. Significance and Use

5.1 The ability of a coating to resist printing is important because its appearance is adversely affected if the smoothness of the coating film is altered by contact with another surface, particularly one with a texture. Interior paint systems, particularly gloss and semigloss on window sills and other horizontal surfaces, often have objects such as flower pots placed on them that may tend to leave a permanent impression. This tendency for a paint film to "print" is a function of the hardness of the coating, the pressure, temperature, humidity, and the duration of time that the object is in contact with the painted surface.

6. Apparatus

6.1 *Conditioning Room,* at 65 to 85°F (18 to 29.5°C) and 40 to 60 % relative humidity.

6.2 *Glass Slides,* approximately 3 by 6 in. (75 by 150 mm).

6.3 *Drawdown Applicator,* 3-in. (75-mm) wide with a clearance of 6 mils (150 µm).

6.4 *Oven,* maintained at 140 ± 3.5°F (60 ± 2°C) or, other agreed upon temperature.

6.5 *Rubber Stoppers,* No. 8 (40-mm top diameter and 32-mm bottom diameter).

6.6 *Cheesecloth,* medium weave, 24/20, bleached cotton.

6.7 *Scissors.*

[1] This test method is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.42 on Architectural Coatings.

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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] *Paint/Coatings Dictionary*, available from the Federation of Societies for Coatings Technology, Blue Bell, PA, 1978.