



Designation: D5064 – 16

Standard Practice for Conducting a Patch Test to Assess Coating Compatibility¹

This standard is issued under the fixed designation D5064; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This practice covers the procedures for assessing coating compatibility when maintenance of an in-place coating system is being contemplated. It does not address procedures for assessing the integrity of the existing coating to determine if it can be repainted, nor does it establish the compatibility of the maintenance coating system with the substrate or corrosion products. The practice is intended for use in the field. SSPC-TU 3 discusses the risks associated with the maintenance painting practice known as overcoating.

NOTE 1—Pass-Fail Criteria (for example, adhesion requirements) are not established by this practice. These should be established by the user or specifier with input from the coating manufacturer.

1.2 The values stated in SI 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

- D16 Terminology for Paint, Related Coatings, Materials, and Applications
- D3359 Test Methods for Measuring Adhesion by Tape Test
- D4138 Practices for Measurement of Dry Film Thickness of Protective Coating Systems by Destructive, Cross-Sectioning Means
- D4414 Practice for Measurement of Wet Film Thickness by Notch Gages
- D4541 Test Method for Pull-Off Strength of Coatings Using

Portable Adhesion Testers

- D6132 Test Method for Nondestructive Measurement of Dry Film Thickness of Applied Organic Coatings Using an Ultrasonic Coating Thickness Gage
- D6677 Test Method for Evaluating Adhesion by Knife
- D7091 Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals
- D7234 Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers

2.2 *SSPC Standards:*³

TU 3 Technology Update 3 Overcoating

3. Terminology

3.1 *Definitions*—For definitions of terms used in this practice, refer to Terminology D16.

4. Summary of Test Method

4.1 The materials under test are applied to the previously painted surface after surface preparation. After the appropriate time has elapsed, the test patch is examined for visual defects and adhesion is assessed.

5. Significance and Use

5.1 In performing maintenance of a coating system, the new coating being applied must be compatible with the existing coating. While general guides exist which indicate compatibility of different generic types of coatings, differences in manufacturer's formulation and the condition of the in-place coating system may affect compatibility.

6. Procedure

6.1 Select test locations for evaluation that adequately characterize differences in configuration of the structure and the exposure environment; that is, vertical versus horizontal surfaces; sheltered versus unsheltered exposure; atmospheric versus splash zone or immersion. A minimum of three test locations with one test patch in each is recommended.

¹ This practice is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.46 on Industrial Protective Coatings.

Current edition approved July 1, 2016. Published August 2016. Originally approved in 1990. Last previous edition approved in 2012 as D5064 – 07 (2012). DOI: 10.1520/D5064-16.

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 Society for Protective Coatings (SSPC), 800 Trumbull Drive, Pittsburgh, PA 15205, <http://www.sspc.org>.