



Designation: D6578/D6578M – 13 (Reapproved 2024)

Standard Practice for Determination of Graffiti Resistance¹

This standard is issued under the fixed designation D6578/D6578M; 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 a basic method for evaluating graffiti resistance of coatings, and use of this practice to evaluate graffiti resistance of coatings after outdoor or laboratory accelerated exposure (either prior to or after graffiti is applied). Graffiti resistance is based on how a defined set of markings is removed by a defined set of cleaning agents.

1.2 This practice also defines procedures (optional) to evaluate graffiti removal after re-marking with subsequent re-cleaning. It does not address recoatability after a coating is no longer graffiti resistant.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

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

1.5 *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. Referenced Documents

2.1 *ASTM Standards:*²

D523 Test Method for Specular Gloss

D4587 Practice for Fluorescent UV-Condensation Expo-

sures of Paint and Related Coatings

D6695 Practice for Xenon-Arc Exposures of Paint and Related Coatings

E1347 Test Method for Color and Color-Difference Measurement by Tristimulus Colorimetry

E1349 Test Method for Reflectance Factor and Color by Spectrophotometry Using Bidirectional (45°:0° or 0°:45°) Geometry

G7 Practice for Natural Weathering of Materials

G113 Terminology Relating to Natural and Artificial Weathering Tests of Nonmetallic Materials

3. Terminology

3.1 The definitions given in Terminology G113 are applicable to this practice.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *cleaning agent, n*—a material used to remove a marking material from the coating surface.

3.2.2 *graffiti resistance, n*—the property of coatings to be resistant to the application of graffiti or exhibiting removal of graffiti without surface damage.

3.2.3 *marking material, n*—a material that can be used to produce graffiti.

3.2.4 *recleanability, n*—the ability of a coating to withstand multiple cycles of marking with subsequent cleaning while maintaining its original characteristics.

3.2.5 *repellent, n*—the property of coatings that prevents materials commonly used as graffiti markings, from forming a continuous film upon application.

4. Summary of Practice

4.1 A series of materials typically used as graffiti markings is applied to test panels of the surface being evaluated. Test specimens may be exposed to outdoor or accelerated exposures (either before or after markings have been applied). The graffiti markings are removed using a series of procedures that begin with wiping with a dry cloth and end with cleaning the surface with an aggressive cleaner. After the best attempt has been made to remove markings, specimens are evaluated visually, or alternatively, by gloss and color change measurements to determine cleanliness. The graffiti resistance is reported as a

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.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.