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Standard Guide for Testing Industrial Protective Coatings¹

This standard is issued under the fixed designation D6577; 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 guide covers the selection and use of test methods and procedures for testing industrial protective coatings. Selection of the standards to be followed must be governed by experience and the requirements in each individual case, together with agreement between the supplier and the user.

1.2 This guide covers the testing of liquid coatings as applied on substrate by brushing, rolling, spraying, or other means appropriate to the coating and circumstance.

NOTE 1—The term “industrial protective coating” as used in this guide is described in the scope of Subcommittee D01.46¹ as “paints applied to substrates on-site of structures and buildings, especially where subject to corrosive environments, as industrial, urban, and marine environments.”

NOTE 2—Guides for testing other coating types, such as Guides [D4712](#), [D5146](#), [D5324](#) or for surface preparation, coating application, such as Guide [D3276](#), are available and should be used when it is applicable.

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.*

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. Referenced Documents

2.1 ASTM Standards:²

[B117](#) Practice for Operating Salt Spray (Fog) Apparatus

[C868](#) Test Method for Chemical Resistance of Protective Linings (Withdrawn 2015)³

¹ This guide 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.

³ The last approved version of this historical standard is referenced on www.astm.org.

[D16](#) Terminology for Paint, Related Coatings, Materials, and Applications

[D56](#) Test Method for Flash Point by Tag Closed Cup Tester

[D93](#) Test Methods for Flash Point by Pensky-Martens Closed Cup Tester

[D185](#) Test Methods for Coarse Particles in Pigments

[D344](#) Test Method for Relative Hiding Power of Paints by the Visual Evaluation of Brushouts (Withdrawn 2018)³

[D522](#) Test Methods for Mandrel Bend Test of Attached Organic Coatings

[D523](#) Test Method for Specular Gloss

[D562](#) Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer

[D609](#) Practice for Preparation of Cold-Rolled Steel Panels for Testing Paint, Varnish, Conversion Coatings, and Related Coating Products

[D610](#) Practice for Evaluating Degree of Rusting on Painted Steel Surfaces

[D660](#) Test Method for Evaluating Degree of Checking of Exterior Paints

[D661](#) Test Method for Evaluating Degree of Cracking of Exterior Paints

[D662](#) Test Method for Evaluating Degree of Erosion of Exterior Paints

[D714](#) Test Method for Evaluating Degree of Blistering of Paints

[D772](#) Test Method for Evaluating Degree of Flaking (Scaling) of Exterior Paints

[D822](#) Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings

[D823](#) Practices for Producing Films of Uniform Thickness of Paint, Coatings and Related Products on Test Panels

[D869](#) Test Method for Evaluating Degree of Settling of Paint

[D870](#) Practice for Testing Water Resistance of Coatings Using Water Immersion

[D968](#) Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive

[D1005](#) Test Method for Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers

[D1014](#) Practice for Conducting Exterior Exposure Tests of Paints and Coatings on Metal Substrates

[D1200](#) Test Method for Viscosity by Ford Viscosity Cup