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Standard Practice for Determining the Effect of Overbaking on Organic Coatings¹

This standard is issued under the fixed designation D 2454; 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 the determination of the time-temperature effect of overbaking on the physical and chemical properties of organic coatings.

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1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this 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 whoever uses this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* Specific hazard statements are given in Section 7.

2. Referenced Documents

2.1 *ASTM Standards:*²

D 522 Test Methods for Mandrel Bend Test of Attached Organic Coatings

D 523 Test Method for Specular Gloss

D 609 Practice for Preparation of Cold-Rolled Steel Panels for Testing Paint, Varnish, Conversion Coatings, and Related Coating Products

D 823 Practices for Producing Films of Uniform Thickness of Paint, Varnish, and Related Products on Test Panels

D 1005 Test Method for Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers

~~D 1186 Test Methods for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base²~~

~~Ø 1308 Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes~~

D 1400 Test Method for Nondestructive Measurement of Dry Film Thickness of Nonconductive Coatings Applied to a Nonferrous Metal Base

D 1640 Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature

D 1729 Practice for Visual Appraisal of Colors and Color Differences of Diffusely-Illuminated Opaque Materials

D 1730 Practices for Preparation of Aluminum and Aluminum-Alloy Surfaces for Painting

D 1731 Practices for Preparation of Hot-Dip Aluminum Surfaces for Painting

D 2092 Guide for Preparation of Zinc-Coated (Galvanized) Steel Surfaces for Painting

D 2197 Test Method for Adhesion of Organic Coatings by Scrape Adhesion

D 2201 Practice for Preparation of Zinc-Coated and Zinc-Alloy-Coated Steel Panels for Testing Paint and Related Coating Products

~~D 2244 Test Method for Calculation of Color Differences From Instrumentally Measured Color Coordinates²~~

~~Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates~~

D 2794 Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)

D 3359 Test Methods for Measuring Adhesion by Tape Test

~~D 3363 Test Method for Film Hardness by Pencil Test²~~ Test Method for Film Hardness by Pencil Test

D 7091 Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals

E 805 Practice for Identification of Instrumental Methods of Color or Color-Difference Measurement of Materials

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 D01.27 on Accelerated Testing.

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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.