



# Standard Practice for Operating Light- and Water-Exposure Apparatus (Unfiltered Open-Flame Carbon-Arc Type) for Testing Paint, Varnish, Lacquer, and Related Products Using the Dew Cycle<sup>1</sup>

This standard is issued under the fixed designation D 3361; 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 specific variations in test conditions that are applicable when Method 2 in Practice G 23 is employed for the exposure of paint and related coatings and materials using the dew cycle with unfiltered open-flame carbon arc.

NOTE 1—Another procedure for exposing these products is covered by Practice D 822 in which specimens are subjected to radiation from the filtered open-flame carbon arc. The filters in Practice D 822 remove some of the shorter wavelength ultraviolet radiation not normally received at the earth's surface.

1.2 *This standard does not purport to address all of the safety problems, 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:

- D 523 Test Method for Specular Gloss<sup>2</sup>
- D 609 Practice for Preparation of Cold-Rolled Steel Panels for Testing Paint, Varnish, Conversion Coatings, and Related Coating Products<sup>2</sup>
- D 610 Test Method for Evaluating Degree of Rusting on Painted Steel Surfaces<sup>3</sup>
- D 660 Test Method for Evaluating Degree of Checking of Exterior Paints<sup>2</sup>
- D 661 Test Method for Evaluating Degree of Cracking of Exterior Paints<sup>2</sup>
- D 662 Test Method for Evaluating Degree of Erosion of Exterior Paints<sup>2</sup>
- D 714 Test Method for Evaluating Degree of Blistering of Paints<sup>2</sup>
- D 772 Test Method for Evaluating Degree of Flaking (Scaling) of Exterior Paints<sup>2</sup>

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.27 on Accelerated Testing.

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<sup>2</sup> Annual Book of ASTM Standards, Vol 06.01.

<sup>3</sup> Annual Book of ASTM Standards, Vol 06.02.

- D 822 Practice for Conducting Tests on Paint and Related Coatings and Materials Using Filtered Open-Flame Carbon-Arc Light- and Water-Exposure Apparatus<sup>2</sup>
- D 823 Test Methods for Producing Films of Uniform Thickness of Paint, Varnish, Lacquer, and Related Products on Test Panels<sup>2</sup>
- D 1005 Test Methods for Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers<sup>2</sup>
- D 1186 Test Methods for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base<sup>2</sup>
- D 1212 Test Methods for Measurement of Wet Film Thickness of Organic Coatings<sup>2</sup>
- D 1400 Test Method for Nondestructive Measurement of Dry Film Thickness of Nonconductive Coatings Applied to a Nonferrous Metal Base<sup>2</sup>
- D 1729 Practice for Visual Evaluation of Color Differences of Opaque Materials<sup>2</sup>
- D 1730 Practices for Preparation of Aluminum and Aluminum-Alloy Surfaces for Painting<sup>4</sup>
- D 1731 Practices for Preparation of Hot-Dip Aluminum Surfaces for Painting<sup>4</sup>
- D 1732 Practices for Preparation of Magnesium Alloy Surfaces for Painting<sup>4</sup>
- D 2092 Practices for Preparation of Zinc-Coated (Galvanized) Steel Surfaces for Painting<sup>3</sup>
- D 2244 Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates<sup>2</sup>
- D 2616 Test Method for Evaluation of Visual Color Difference with a Gray Scale<sup>2</sup>
- D 4214 Test Methods for Evaluating Degree of Chalking of Exterior Paint Films<sup>2</sup>
- D 4587 Practice for Conducting Tests on Paint and Related Coatings and Materials Using a Fluorescent UV-Condensation Light-and-Water Exposure Apparatus<sup>2</sup>
- E 97 Test Method for Directional Reflectance Factor, 45-deg 0-deg, of Opaque Specimens by Broad-Band Filter Reflectometry<sup>5</sup>
- G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure

<sup>4</sup> Annual Book of ASTM Standards, Vol 02.05.

<sup>5</sup> Discontinued; see 1992 Annual Book of ASTM Standards, Vol 14.02.