



Designation: **D4708—19** **D4708 – 24**

## Standard Practice for Preparation of Uniform Free Films of Organic Coatings<sup>1</sup>

This standard is issued under the fixed designation D4708; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope\*

1.1 This practice covers the preparation of free films of organic coatings for use in determining the physical properties of the coatings.

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, 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:*<sup>2</sup>

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

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

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

[D1653 Test Methods for Water Vapor Transmission of Organic Coating Films](#)

[D2370 Test Method for Tensile Properties of Organic Coatings](#)

[D5590 Test Method for Determining the Resistance of Paint Films and Related Coatings to Fungal Defacement by Accelerated Four-Week Agar Plate Assay](#)

[E96/E96M Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials](#)

### 3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of terms used in this standard, refer to Terminology [D16](#).

### 4. Summary of Test Method

4.1 Free films are prepared by depositing a uniform wet coating of the test material on a release substrate. The applied films are dried or baked, cut into appropriate size for the intended physical property test, and then stripped from the release substrate.

<sup>1</sup> 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 [D01.23](#) on Physical Properties of Applied Paint Films.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

\*A Summary of Changes section appears at the end of this standard