



Designation: ~~D1308–02 (Reapproved 2013)~~ D1308 – 20

Standard Test Method for Effect of Household Chemicals on Clear and Pigmented ~~Organic Finishes~~ Coating Systems¹

This standard is issued under the fixed designation D1308; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This test method covers determination of the effect of household chemicals on clear and pigmented organic finishes, resulting in any objectionable alteration in the surface, such as discoloration, change in gloss, blistering, softening, swelling, loss of adhesion, or special phenomena.

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 ~~health~~ 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

<https://standards.iteh.ai/catalog/standards/sist/fb18ea18-78c7-491f-b753-9973f8a12359/astm-d1308-20>
[D609 Practice for Preparation of Cold-Rolled Steel Panels for Testing Paint, Varnish, Conversion Coatings, and Related Coating Products](#)

3. Summary of Test Method

3.1 Three test methods, each of which is particularly applicable to individual reagents under study, are described as follows:

3.1.1 *Spot Test, Covered*—The reagent is placed on the test surface and immediately covered with a watch glass.

3.1.2 *Spot Test, Open*—The test surface is subjected directly to the effect of substance, such as citrus fruit, oils, greases, beverages, etc.

3.1.3 *Immersion Test*—A suitably prepared panel is immersed in the test reagent.

¹ This test method is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.55 on Factory Applied Coatings on Preformed Products.

Current edition approved June 1, 2013; Dec. 1, 2020. Published July 2013; December 2020. Originally approved in 1954. Last previous edition approved in 2007 as D1308 – 02 (2007) (2013). DOI: ~~10.1520/D1308-02R13~~ 10.1520/D1308-20.

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.

4. Significance and Use

4.1 Resistance to various liquids used in the home is an important characteristic of organic finishes. These test methods provide the means by which the relative performance of coating systems may be evaluated. It should be recognized that continuous films are necessary for reliable results.

5. Test Panels

5.1 *Steel Panels*—See Practice [D609](#).

5.2 *Other ~~Metal Panels~~; metal panels*, as agreed upon by the purchaser and the seller of the finish being tested.

5.3 *Other substrates*, as agreed upon by the purchaser and the seller of the finish being tested.

6. Reagents

6.1 The choice of reagent shall be governed by ultimate coating use and by agreement between the purchaser and the seller of the finish being tested. The following reagents are suggested:

6.1.1 *Distilled Water*, cold.

6.1.2 *Distilled Water*, hot.

6.1.3 *Ethyl Alcohol (50 % volume)*.

6.1.4 *Vinegar (3 % acetic acid)*.

6.1.5 *Alkali Solution*.

6.1.6 *Acid Solution*.

6.1.7 *Soap Solution*.

6.1.8 *Detergent Solution*.

6.1.9 *Lighter Fluid and Other Volatile Reagents*.

6.1.10 *Fruit*—Piece of cut fruit, with cut portion placed face down on panel.

6.1.11 *Oils and Fats*—Butter, margarine, lard, shortening, vegetable oils, etc.

6.1.12 *Condiments*—Mustard, catsup (ketchup).

6.1.13 *Beverages*—Coffee, tea, cocoa.

6.1.14 *Lubricating Oils and Greases*.

6.1.15 *Other Reagents*, as agreed upon between the purchaser and the seller.

7. Procedure

7.1 *Panel Preparation*—Spot and direct application tests may be carried out on the fabricated article coated with the finishing system under evaluation, if sufficient plane surface is available. For immersion tests and tests where the finished article is not available, select panels in accordance with Practice [D609](#), or prepare special metal panels or other coated materials according to agreement between the purchaser and the seller of the finish. Apply the finish according to the method and the schedule prescribed by the user of the lacquer. This schedule includes number of coats, film thickness, and other features. Allow the finished panels to age 1 week at normal room conditions, about 25°C (77°F) and 50 % relative humidity, before testing.