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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes¹

This standard is issued under the fixed designation D 1308; 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 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 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 609 Practice for Preparation of Cold-Rolled Steel Panels for Testing Paint, Varnish, Conversion Coatings, and Related Coating Products²

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.

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 Test Method D 609.

5.2 *Other Metal Panels*, 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 for time agreed upon between the purchaser and the seller.

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 Methods D 609, or prepare special metal panels 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

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

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² *Annual Book of ASTM Standards*, Vol 06.01.