Designation: D1436 – 17

Standard Test Methods for Application of Emulsion Floor Polishes to Substrates for Testing Purposes[1]

This standard is issued under the fixed designation D1436; 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 These test methods cover procedures for application of emulsion floor polish films to suitable substrates for testing purposes. Five test methods are covered, as outlined in Section 3.

1.2 These procedures are limited to use on flat, rigid substrates mounted, if necessary, on a nonabsorbent backing.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are provided for information only.

1.4 *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.*

1.5 *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. Significance and Use

2.1 All five of the test methods described will produce polish films from emulsion floor polishes which can be used for various performance tests. The choice of test method is left up to the individual laboratory.

3. Choice of Test Method

3.1 Under actual use conditions, the thickness of the dried film deposited from water emulsion floor polishes ranges from 0.03 mil to 0.4 mil. No one laboratory method has been found that will produce uniformly thick films throughout this range on all substrates. In many cases, the surface roughness and porosity of the substrate is of the same order of magnitude as the thickness of the deposited films. Therefore, several alternative methods have been developed. Unless otherwise specified, the choice of method of application and substrate shall be mutually agreed upon by the purchaser and the seller. The characteristics of the five methods are as follows:

3.1.1 *Method A. Automatic Dip Coater*—This method produces thin films of excellent uniformity on the first coat with substrates of low or moderate porosity. Two- or three-coat applications may produce partial solubility of the earlier coats with consequent loss of uniformity.

3.1.2 *Method B. Hand Applicator*—This method simulates use conditions and produces thin films of satisfactory uniformity for many test purposes where the area of the test panel is small (304.8 by 304.8 mm (12 by 12 in.) or smaller). With large panels, considerable local nonuniformity of film thickness may result.

3.1.3 *Method C. Manual Dip Method*—This method results in wedge-shaped films, of moderate thickness, that are thicker at the bottom than at the top of the panel. This method is rapid and results in reproducible films in the center of the test panel which are useful for comparison tests and for tests involving the surface properties of the wax film.

3.1.4 *Method D. Blade Applicator*—This method merely spreads a known volume of emulsion over a known surface area. The uniformity of the resulting film depends on the flatness of the substrate, the surface tension of the emulsion, and the interfacial tension between the emulsion and the substrate. The method is satisfactory for producing thick to moderately thin films. Some practice and familiarity with the method are necessary to produce uniform thin films.

3.1.5 *Method E. Pour Surface*—This method covers pouring a small amount of polish over a tile held at a 45° angle and allowing it to flow uniformly down the tile and coating it. After the polish is poured and the bottom bead forms, it is wiped off and allowed to dry. The method is satisfactory for producing thick films for slip resistance testing.

4. Standard Conditions

4.1 The materials and apparatus shall be permitted to come to equilibrium in an atmosphere having a relative humidity of 50 ± 4 % and a temperature of 23.8 ± 1.1°C (75 ± 2°F).

[1] These test methods are under the jurisdiction of ASTM Committee D21 on Polishes and are the direct responsibility of Subcommittee D21.04 on Performance Tests.

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