



Designation: ~~D5678 – 95 (Reapproved 2008)~~ **D5678 – 95 (Reapproved 2016)**

Standard Test Method for Freeze/Thaw Resistance of Wax Emulsion Floor Polish¹

This standard is issued under the fixed designation D5678; 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 test method covers the determination of the stability of wax emulsion floor polishes when these are exposed to repeated cycles of freezing and thawing. Possible degradation of the emulsion is observed and possible reduction of initial gloss is measured.

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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

[D1436 Test Methods for Application of Emulsion Floor Polishes to Substrates for Testing Purposes](#)

[D1455 Test Method for 60° Specular Gloss of Emulsion Floor Polish](#)

3. Significance and Use

3.1 This test method is used to determine the effect of freezing on wax emulsion floor polishes. It may be used to predict the stability of a floor polish in transit or when exposed to freezing, and whether or not the polish is damaged by freezing.

4. Apparatus

4.1 *Freezer*, adjusted to -7.8 to -6.7°C (18 to 20°F).

4.2 *Clear Bottles*, three, 4 oz (125 mL) capacity.

4.3 *Test Flooring Substrates—Official Vinyl Composition Tile (OVCT)*,³ black, 304.8 mm (12 by 12 in.).

4.4 *60-Deg Gloss Meter*.

4.5 *Polishes*, to be tested.

5. Procedure

5.1 Determine the turbidity of each polish, visually or by any other suitable method.

5.2 Apply one coat of each test polish on a black vinyl composition tile using pour method (E) (see Test Method [D1436](#)). Allow polish to dry in a vertical position at room temperature. After polish is dry, wait 1 h, then buff with a soft cotton cloth. Determine the initial gloss in accordance with Test Method [D1455](#).

5.3 Place 100 mL of polish in each of three 125 mL (4 oz) clear bottles. Place the filled bottles side by side, horizontally, in the freezer on a rack. Provide a minimum of 25 mm (1 in.) between the bottles and the freezer walls and keep the contact area between the bottles and the rack to a minimum.

5.4 Allow the samples to remain in the freezer for 16 h, or a minimum of 8 h after becoming solid.

¹ This test method is under the jurisdiction of ASTM Committee [D21](#) on Polishes and is the direct responsibility of Subcommittee [D21.03](#) on Chemical and Physical Testing.

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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.

³ Available from Chemical Specialties Manufacturers Assn., 1913 I St., NW, Washington, DC 20006.