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Standard Guide for Preparing Specifications for Solvent-based Floor Polishes¹

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1. Scope

1.1 This is a guide for preparing specifications for solvent-based floor polishes (liquid or paste) that are intended for use on all wood and solvent-resistant floors.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

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

- D56 Test Method for Flash Point by Tag Closed Cup Tester
- D93 Test Methods for Flash Point by Pensky-Martens Closed Cup Tester
- D217 Test Methods for Cone Penetration of Lubricating Grease
- D1455 Test Method for 60° Specular Gloss of Emulsion Floor Polish
- D2047 Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine
- D2834 Test Method for Nonvolatile Matter (Total Solids) in Water-Emulsion Floor Polishes, Solvent-Based Floor Polishes, and Polymer-Emulsion Floor Polishes
- D3206 Test Method for Soil Resistance of Floor Polishes
- D3207 Test Method for Detergent Resistance of Floor Polish Films
- D3278 Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus
- D3828 Test Methods for Flash Point by Small Scale Closed Cup Tester

¹ This guide is under the jurisdiction of ASTM Committee D21 on Polishes and is the direct responsibility of Subcommittee D21.05 on Specifications.

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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.

2.2 Federal Specification:³

Interim Federal Specification, Wax, General Purpose, Solvent Type, P-W-00158d (GSA-FSS) Amendment 1, July 13, 1972.

3. Significance and Use

3.1 This guide may be the basis for either the buying authority or the consumer to prepare a specification for solvent-based floor polishes (liquid or paste). Specifications prepared under this guide are for products intended for use on all wood and solvent resistant floors. Any reference material utilized and limits set are to be agreed upon by the seller, purchaser, or user.

4. Classification

4.1 *Buffing-Type Floor Polish*—A floor polish that requires buffing to maintain or enhance appearance, or both.

4.2 *Self-Polishing Floor Polish*—A floor polish that dries to a shine.

5. Basis of Purchase

5.1 *Identification of Samples*—The qualification sample submitted by the manufacturer will be identified for the purpose of comparing with material subsequently submitted for acceptance. Within test method limits, stated herein, qualification and acceptance samples should be identical. Any lot or lots found not to be identical with the standard sample shall be rejected. Reference material is to be agreed upon between the purchaser and the seller.

6. Requirements

6.1 Physical (Product Specification Values or Limits):

6.1.1 *Total Solids*—The solids shall not be greater than () or less than () when analyzed in accordance with 8.1.

6.1.2 *Flash Point*—The flash point of liquid products shall be greater than () when determined in accordance with 8.2.

6.1.3 *Paste Hardness*—The paste hardness shall be less than () when determined in accordance with 8.3.

6.1.4 *Liquid Viscosity*—The liquid wax shall be pourable within agreed temperature limits. See 8.4.

³ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

6.1.5 *Odor*—The product shall have no offensive odor. See 8.4.

6.1.6 *Color*—The product shall have an agreeable color. See 8.4.

6.1.7 *Product Stability*—Product stability shall be determined in accordance with 8.5.

6.2 *Chemical (Performance Values and Limits):*

6.2.1 *Gloss*—Gloss shall be determined in accordance with 9.1. Apply product according to product directions.

6.2.2 *Resistance to Soiling*—Measure in accordance with 9.2. Suitable panels should be coated according to product directions.

6.2.3 *Detergent Resistance*—Measure in accordance with 9.3. Suitable panels should be coated according to product directions.

6.2.4 *Coefficient of Friction*—The coefficient of friction shall not be less than () when determined in accordance with 9.4.

7. Sampling

7.1 *For Inspection Lots*—Sample all production lots. Take a minimum of one sample. The sample shall be representative and of a size mutually agreed upon.

7.2 *Method of Sampling*—Select samples at random. Take the number of samples agreed upon between the purchaser and the seller. Cans or containers should be coded or identified to correspond to production batch codes.

7.3 *Identification and Disposition*—All subdivisions of the sample taken in accordance with 7.1 and 7.2 shall be properly identified, including any code or batch numbers, and numbered consecutively. Samples shall be distributed as directed by the purchaser or his authorized representative. Any remaining shall be retained at the sampling site pending further or final instructions.

8. Test Methods

8.1 *Total Solids*—Test Method D2834.

8.2 *Flash Point*—Use Test Methods D56, D93, D3278 or D3828 as indicated in Note 1.

NOTE 1—For U.S. Department of Transportation's (RSPA)⁴ and U.S. Department of Labor's (OSHA)⁴ regulations use Test Method D56 or

⁴ Available from Superintendent of Documents, Government Printing Office, Washington, DC 20402.

D3278 for liquids with a flash point of 37.8°C (100°F) and a viscosity of less than 45 SUS at 37.8°C (100°F) or 9.5 cSt at 25°C (77°F), or do not contain suspended solids or have a tendency to form a surface film while under test. Use Test Method D93 or D3278 for liquids having viscosities of 45 SUS or more at 37.8°C (100°F) or that contain suspended solids or have a tendency to form a surface film while under test. For Consumer Product Safety Commission's regulations, use methods described in 16 CFR Chapter 11,⁴ which specifies the use of a modified Test Method D3828, a closed-cup method.

NOTE 2—As of August 10, 1987 all three regulatory agencies listed in Note 1 define flammable liquids as those with flash points of under 37.8°C (100°F) using a closed-cup method. Other classifications have been established by these agencies.

8.3 *Paste Hardness*—Test Method D217.

8.4 *Liquid Viscosity, Odor, and Color* to match reference standards as described in 5.1.

8.5 *Stability:*

8.5.1 *Liquid Wax*—Fill stoppered graduated 100-mL cylinder with a uniform sample and leave undisturbed for 24 h, at 30 ± 1°C. Then allow the sample to stand an additional 24 h at 25 ± 1°C and then determine the degree of settling. Separation should be less than 5 %.

8.5.2 *Paste Wax*—Examine the sample of paste wax after standing in a closed container at 30 ± 1°C for 24 h followed by 24 h at 25 ± 1°C. There shall be no separation of solvent from the wax.

9. Performance Testing

9.1 *Gloss*—Test Method D1455.

9.2 *Resistance to Soiling*—Test Method D3206.

9.3 *Detergent Resistance*—Test Method D3207.

9.4 *Coefficient of Friction*—Test Method D2047.

10. Inspection

10.1 *Inspection of Deliveries*—Inspection shall be made by the procuring agency or a duly authorized representative at the time and place designated by the procuring agency.

11. Packaging and Labeling

11.1 Packaging and labeling shall be as mutually agreed upon between the purchaser and the seller.

12. Keywords

12.1 floor polishes; floor wax; liquid wax; paste wax; solvent based polish; solvent based wax

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