



Designation: D4078 – 02 (Reapproved 2021)

Standard Specification for Water Emulsion Floor Polish¹

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1. Scope

1.1 This specification covers floor polish intended for use on all nonwood floors and on sealed-wood floors.

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

1.3 *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

[D1290 Test Method for Sediment in Water-Emulsion Polishes by Centrifuge](#)

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

[D1791 Test Method for Accelerated Aging of Liquid Water-Emulsion Floor Polishes](#)

[D1792 Test Method for Long-Term Removability Properties of Emulsion Floor Polishes](#)

[D1793 Test Method for Water Spotting of Emulsion Floor Polishes](#)

[D2047 Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine](#)

[D2048 Test Method for Powdering of Floor Polish Films](#)

[D2834 Test Method for Nonvolatile Matter \(Total Solids\) in Water-Emulsion Floor Polishes, Solvent-Based Floor Polishes, and Polymer-Emulsion Floor Polishes](#)

[D3052 Practice for Rating Water-Emulsion Floor Polishes](#)

[D3153 Test Method for Recoatability of Water-Emulsion Floor Polishes](#)

[D3206 Test Method for Soil Resistance of Floor Polishes](#)

[D3207 Test Method for Detergent Resistance of Floor Polish Films](#)

[D3209 Test Method for Freeze/Thaw Resistance of Polymer Floor Polishes](#)

[D3210 Test Method for Comparing Colors of Films from Water-Emulsion Floor Polishes](#)

[E70 Test Method for pH of Aqueous Solutions With the Glass Electrode](#)

3. Requirements

3.1 *Nonvolatile Content (Total Solids)*—The nonvolatile content shall be agreed upon between the purchaser and seller, and shall be determined by Test Method [D2834](#).

3.2 *Sediment*—Any sediment present in the product shall be soft and free of grit. The amount of sediment shall not exceed 0.2 % when tested as specified in Test Method [D1290](#).

3.3 *pH*—The pH of the product shall not be greater than 10.0 when tested as specified in Test Method [E70](#).

3.4 *Stability:*

3.4.1 *Heat (Accelerated Aging)*—When tested as specified in Test Method [D1791](#), the product shall develop no offensive odor, exhibit minimum creaming, gelling, or separation, and display less than 10 % loss of 60 ° specular gloss when tested as specified in Test Method [D1455](#).

3.4.2 *Freeze/Thaw Resistance*—When tested as specified in Test Method [D3209](#), the product shall exhibit minimum creaming, gelling, or separation, and display less than 10 % loss of 60 ° specular gloss when tested as specified in Test Method [D1455](#).

3.5 *Color*—Color, as expressed by the whiteness index, shall be measured as specified in Method [D3210](#). The product shall be equivalent or have less discoloring effect when compared to the control floor polish specified in [3.15](#).

3.6 *Odor*—The product shall have no offensive odor.

3.7 *Visual Gloss*—The visual gloss shall be equivalent to the control floor polish specified in [3.15](#). Utilize the visual gloss method in Practice [D3052](#) rather than the 60 ° specular gloss determination by gloss meter.

¹ This specification 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.

3.8 *Recoatability*—The dry film shall have at least a FAIR rating, preferably GOOD, when tested as specified in Test Method **D3153** (Bench Panel Test).

3.9 *Water-Spotting*—The dry film shall show minimum whitening, color change, change in appearance, or removal of film when tested as specified in Test Method **D1793**.

3.10 *Detergent Resistance:*

3.10.1 This requirement is optional and should be used only for those products presented as being detergent resistant.

3.10.2 The dry film shall have at least a GOOD rating, when tested as specified in Test Method **D3207**.

3.11 *Resistance to Soiling:*

3.11.1 The dry film shall have equivalent or superior resistance to soiling as compared to the control floor polish specified in **3.15**, when tested as specified in Practice **D3052**.

3.11.2 If a bench test method is preferred, the dry film shall have an equivalent or superior resistance to soiling as compared to the control floor polish specified in **3.15** when tested as specified in Test Method **D3206**.

3.12 *Powdering*—The dry film shall have an equivalent or less severe degree of powdering when tested as specified in Test Method **D2048** and compared to the control floor polish specified in **3.15**.

3.13 *Coefficient of Friction*—The dry film shall have a coefficient of static friction of at least 0.5 when tested as specified in Test Method **D2047**.

3.14 *Removability*—The dry film shall have at least a GOOD rating when tested as specified in Test Method **D1792**. If the product is described as being detergent resistant and meets the requirements of **3.10** of this specification, add an additional 5 mL of ammonium hydroxide (NH₄OH, 28 %) per 100 mL of the specified stripper solution.

3.15 *Performance*—The dry film shall have an acceptable performance rating when tested as specified in Practice **D3052**. A suitable reference material to be utilized as a control floor polish in the performance evaluation shall be agreed upon between the purchaser and seller.

4. Keywords

4.1 finish floor; floor; specification; water emulsion

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