



Designation: D5343 – 06 (Reapproved 2018)

Standard Guide for Evaluating Cleaning Performance of Ceramic Tile Cleaners¹

This standard is issued under the fixed designation D5343; 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 guide covers the evaluation of the cleaning performance of products intended for use on ceramic tiles. This guide provides techniques for soiling, cleaning, and evaluating performance of detergent systems under controlled, but practical, hard-surface cleaning conditions.

NOTE 1—The soils described in this guide are known in the industry as “soap scum.”

1.2 Such systems include any detergent, cleaner, or abrasive cleanser intended for cleaning hard surfaces composed of ceramic tile. This guide is not appropriate for evaluating performance on grout. This guide also excludes other surfaces such as glass, resilient flooring, synthetic countertop surfaces or washable wall surfaces. The products for which this guide is intended include solutions of soluble powdered detergent, dilutions of concentrated liquid detergent, or products intended to be used full strength, for example, foams, sprays, liquid, wipes, powders, or paste.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* Material Safety Data Sheets are available for reagents. Review them for hazards prior to usage.

1.4 *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

D1729 Practice for Visual Appraisal of Colors and Color Differences of Diffusely-Illuminated Opaque Materials
D2960 Guide for Controlled Laundering Test Using Naturally Soiled Fabrics and Household Appliances (Withdrawn 2013)³

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *bathroom soil*—the soil composed of materials present on typical bathroom surfaces.

3.1.2 *cycle*—a cycle is defined as being both the back and forth strokes on the scrubbing apparatus.

3.1.3 *soil*—in hard surface cleaning, foreign matter on a hard surface such as a ceramic tile.

3.1.4 *substrate*—the soiled surface that is being cleaned.

4. Summary of Guide

4.1 Soils are artificially applied in a standardized manner to a ceramic tile surface. The soiled surfaces are cleaned using a straight-line washability apparatus, and the cleaned substrates are evaluated using reflectance measurements, or visually by a panel of judges. A schematic diagram of the soil composition is summarized in Fig. 1.

5. Significance and Use

5.1 This guide suggests methodology for cleaning tests. This methodology can only be applied to assess product performance on typical bathroom soils and is not inclusive of all potential soils present on ceramic tiles or other bathroom

¹ This guide is under the jurisdiction of ASTM Committee D12 on Soaps and Other Detergents and is the direct responsibility of Subcommittee D12.16 on Hard Surface Cleaning.

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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 The last approved version of this historical standard is referenced on www.astm.org.

*A Summary of Changes section appears at the end of this standard