



Designation: F1037 – 18 (Reapproved 2022)

Standard Test Method for Visual Rating of Appearance of Resilient Floors¹

This standard is issued under the fixed designation F1037; 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 is intended to provide a numerical rating system for classification of resilient floors during the various stages of their wear life in relation to their condition, as perceived by a knowledgeable user.

1.2 This test method is intended to allow comparison between two or more samples or groups of samples for differences in visual appearance.

1.3 This method provides recommended viewing conditions and lighting for rating visual differences between samples or groups of samples.

1.4 This method can be utilized to evaluate change in visual appearance before and after some specified test condition exposure, for example, in service wear due to foot traffic, or other tests where change in appearance might occur.

1.5 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.6 *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental health practices and determine the applicability of regulatory limitations prior to use.*

1.7 *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.*

¹ This test method is under the jurisdiction of ASTM Committee F06 on Resilient Floor Coverings and is the direct responsibility of Subcommittee F06.20 on Test Methods.

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2. Referenced Documents

2.1 ASTM Standards:²

- D1436 Test Methods for Application of Emulsion Floor Polishes to Substrates for Testing Purposes
- F141 Terminology Relating to Resilient Floor Coverings

3. Terminology

3.1 See Terminology F141 for general Resilient terms and definitions, in addition to the more specific terms that have been defined below.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *appearance, n*—the collected visual aspects regarding the flooring material's surface, including color, texture, gloss, etc.

3.2.2 *color, perceived, n*—attribute of visual perception that can be described by color names, such as white, gray, black, yellow, brown, red, purple, etc., as this practice utilizes the term it is more of a visible color difference between two adjacent areas or samples.

3.2.3 *gloss, n*—a level of shiny or lustrous appearance resulting from the tendency of a flooring surface to reflect light at one angle more than at others. Resilient flooring surface gloss may range from very low (dull) to very high (shiny).

3.2.4 *qualified panel, n*—individual(s) who participate in comparative evaluation of a sample's appearance change, that represent the spectrum of having familiarity with the product, familiarity with maintenance of the product, and familiarity with the product's use; sometimes referred to as a knowledgeable user.

3.2.5 *surface scratches, n*—deterioration of a product's surface texture and appearance due to abrasive wear exposure.

3.2.6 *surface texture*—multi-level dimensioning of the flooring surface, which can be natural or artificially generated,

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.

that provides aesthetic or functional use attributes, for example, mechanical or chemical embossing.

4. Significance and Use

4.1 Ratings are developed by some subjective or comparative evaluation criteria, or both, of a sample(s) to some reference criteria or when compared to a control sample. These parameters generally include change in gloss, color, surface texture, alterations to pattern and possibly restorability of appearance with normal maintenance procedures, including the use of finishes or buffing. Rating is done by a qualified individual or preferably by a panel of qualified observers under specified lighting conditions in accordance with prescribed procedures.

5. Apparatus

5.1 *Buffing Machine*, equipped with single or double brush (pad), soft fiber polishing brushes, and lamb's wool pads or appropriate microfiber pad. When equipped with polishing brushes, the unit should deliver a nominal lineal velocity (loaded) of 1100 ft/min to 1400 ft/min (each brush) and a Dwell ratio of 190 ft² to 210 ft² (17 m² to 19 m²) per min at a pressure of 0.40 psi to 0.50 psi. When equipped with buffing pads, the unit shall deliver a nominal lineal velocity (loaded) of 1100 lineal fpm to 1400 lineal fpm (each pad) and a Dwell ratio of 500 ft² to 550 ft² (45 m² to 50 m²) per min at a pressure of 0.15 psi to 0.20 psi.

5.2 *Scrub Brush*, approximately 2½ in. by 7 in. (63 mm by 178 mm) with nylon bristles approximately 1¼ in. (32 mm) long.

5.3 *Cellulose Sponge*, approximate dry dimension 8 in. by 4¼ in. by 1 in. (203 mm by 108 mm).

5.4 *Lay-up Board*, approximately 4 ft by 8 ft (1.2 m by 2.4 m) mounted at suitable easy viewing angle, for example, 0 to 30°, with bottom and side reference support edges. See Fig. 1 as an example lay-up table.

6. Reagent

6.1 *Cleaning Solution*, shall be neutral cleaner as recommended by the flooring manufacturer and shall be prepared in sufficient quantity in accordance with the manufacturer's instructions.

7. Sampling, Test Specimens, and Test Units

7.1 Specimen size will vary, generally as a function of individual tile or plank size. It may also vary depending upon use, that is, simple comparative differences, does sample (tile or plank) match standard, or if all samples within a particular sample set are of equal visual quality, etc. The specimen or specimen panel (group of tiles or planks of the same material) size can vary based on desired lay-up size, for example, the particular test evaluation, the package content size, etc., or whatever is utilized as part of a standard sampling procedure.

7.2 For comparison before and after something is done to a specimen or specimen set, for example, wear exposure test, the specimen size can vary as desired. A typical size panel would be 24 in. by 24 in. (610 mm by 610 mm) and contain four 12 in. by 12 in. (305 mm by 305 mm) specimens. In addition, a companion specimen must be retained and stored in a location where its appearance will not be altered. This specimen will be used for comparison purposes throughout the test cycle. If a specimen or specimen panel set has been exposed to use or abrasive wear conditions then each specimen or specimen panel is to be cleaned in accordance with manufacturer's direction or otherwise maintained using the washing procedure in 8.1. The finish or restorative procedure, as recommended by the manufacturer, shall be followed before each rating session. One may choose to perform the restorative maintenance procedure to the original unexposed samples of these products in order to more closely match expected maintained gloss equivalency. Those no-finish floors whose appearance, through exposure to traffic, has deteriorated to an overall rating of "3" or more shall be restored with either the finish procedure (no



FIG. 1 Lay-up Table