



# Standard Guide for Conducting Wear Tests Using a Rotary Platform Abraser<sup>1</sup>

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## 1. Scope

1.1 This guide covers and is intended to assist in establishing procedures for conducting wear tests of rigid or flexible materials utilizing the rotary platform abraser.

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

1.2.1 *Exception*—Inch-pound units are used when stating rotational speed and determining coating thickness.

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:<sup>2</sup>

- C501 Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser
- C1353 Test Method for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic Using a Rotary Platform, Double-Head Abraser
- D1044 Test Method for Resistance of Transparent Plastics to Surface Abrasion
- D3389 Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader)
- D3451 Guide for Testing Coating Powders and Powder Coatings
- D3730 Guide for Testing High-Performance Interior Architectural Wall Coatings
- D3884 Test Method for Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method)
- D4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser

- D4685 Test Method for Pile Fabric Abrasion
- D4712 Guide for Testing Industrial Water-Reducible Coatings
- D5034 Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)
- D5035 Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)
- D5144 Guide for Use of Protective Coating Standards in Nuclear Power Plants
- D5146 Guide to Testing Solvent-Borne Architectural Coatings
- D5324 Guide for Testing Water-Borne Architectural Coatings
- D6037 Test Methods for Dry Abrasion Mar Resistance of High Gloss Coatings
- D7255 Test Method for Abrasion Resistance of Leather (Rotary Platform, Double-Head Method)
- F362 Test Method for Determining the Erasability of Inked Ribbons
- F510 Test Method for Resistance to Abrasion of Resilient Floor Coverings Using an Abrader with a Grit Feed Method
- F1344 Specification for Rubber Floor Tile
- F1478 Test Method for Determination of Abrasion Resistance of Images Produced from Copiers and Printers (Taber Method)
- F1978 Test Method for Measuring Abrasion Resistance of Metallic Thermal Spray Coatings by Using the Taber Abraser
- G40 Terminology Relating to Wear and Erosion

## 3. Terminology

### 3.1 Definitions of Terms Specific to This Standard:

3.1.1 *abraser*—wear testing instrument to evaluate abrasion resistance, also referred to as an abrader.

3.1.2 *abrasion cycle*—in abrasion testing, one or more movements of the abradant across a material surface, or the material surface across the abradant, that permits a return to its starting position. In the case of the rotary platform abraser test method, it consists of one complete rotation of the turntable specimen platform.

3.1.3 *mil*—a U.S. term referring to the imperial unit of measure of one one-thousandth of an inch (0.001 in.) referred to elsewhere in the world as “one thou;” 1 mil = 25.4 microns.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.