



Designation: D6013 – 00 (Reapproved 2024)

Standard Test Method for Determination of Area Stability of Leather to Laundering¹

This standard is issued under the fixed designation D6013; 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 method² covers the determination of launderability of dyed leathers with or without a pigment finish. This test method does not apply to wet blue.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

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.*

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:³

D1610 Practice for Conditioning Leather and Leather Products for Testing

3. Significance and Use

3.1 The procedure is primarily intended to evaluate the ability of a leather specimen to withstand fixed, and rather strenuous, laundering conditions. This test method is not intended as a recommended washing procedure, neither household nor commercial. The resulting area stability is determined.

¹ This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of Subcommittee D31.04 on Apparel.

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² This test method was developed from Federal Test Method Standard No. 311 Method 3041.1 in cooperation with the U.S. Army Natick Research Development and Engineering Center, Natick, MA, and the Defense Personnel Support Center Directorate of Clothing and Textiles, Philadelphia, PA.

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

4. Apparatus⁴

4.1 **Washing Machine**—A Launder-Ometer,⁵ or an assembly of apparatus capable of similar test conditions (see Note). In either machine, 1 pt (500 mL) specimen containers are held with their bases toward a horizontal shaft and 2 in. (50 mm) out from its center of rotation. Speed of rotation shall be 40 rpm to 45 rpm. Provision shall be made for maintaining the initial temperature of the specimen containers throughout the test. Additional agitation shall be provided by ¼ in. (6.4 mm) stainless steel balls in the specimen containers. Apparatus is illustrated in Figs. 1-3.

NOTE 1—A motor-driven assembly, designed to hold 1 pt (500 mL) specimen containers so that they are relative to the axis of the motor shaft in the same way as in the Launder-Ometer, can be used.⁵ The entire assembly, fitted with specimen containers, shall be turned at 40 rpm to 45 rpm inside a simple boxlike container which is heated at 120 °F (49 °C) with thermostatic control. Thus, heat loss from the preheated contents of the specimen containers is held at a minimum during the 30-min washing periods. Such an apparatus is illustrated in Figs. 4 and 5.

4.2 **Stainless Steel Balls**, type 316, ¼ in. (6 mm) diameter.

4.3 **Steel or Glass Jar**, 1 pt (0.5 L), with washer and cap.

4.4 **Circulating-air Oven**, capable of maintaining the required temperature of 120 °F $\pm$ 2 °F (49 °C $\pm$ 1 °C).

4.5 **Blotting Paper**,⁶(laboratory) (see 7.2).

4.6 **Metal Die**, for cutting the specimen to the required dimensions.

4.7 **Soap Solution**,⁷prepared by dissolving 5 g of standard neutral chip soap in 1 L of distilled water (see 7.3).

⁴ The leather washing apparatus drawing is available from ASTM Headquarters, 100 Barr Harbor Drive, W. Conshohocken, PA 19428-2959. Request Adjunct ADJD6013.

⁵ The sole source of supply of the apparatus known to the committee at this time is Atlas Electric Devices Co., 4114 N. Ravenswood Ave., Chicago, IL 60613. If you are aware of alternative suppliers, please provide this information to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend.

⁶ The sole source of supply of the apparatus known to the committee at this time is Standard Paper Manufacturing Co., P.O. Box 1554, Richmond, VA 23212. If you are aware of alternative suppliers, please provide this information to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend.

⁷ The sole source of supply of the apparatus known to the committee at this time is AATCC National Headquarters, P.O. Box 12215, Research Triangle Park, NC 22709. If you are aware of alternative suppliers, please provide this information to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend.