Designation: ~~D1813 – 13~~ D1813 – 13 (Reapproved 2017)

Standard Test Method for Measuring Thickness of Leather Test Specimens[1]

This standard is issued under the fixed designation D1813; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This test method covers the measurement of the thickness of leather test specimens in which the dimensions of the specimens are used directly in determining the results of tests for physical properties. This test method does not apply to wet blue.

1.2 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.

1.3 *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~~ safety, health, and ~~health~~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:*[2]

D1610 Practice for Conditioning Leather and Leather Products for Testing

3. Significance and Use

3.1 This test method shall be used where precise dimensions are necessary for calculation of properties expressed in physical units. It is not intended to replace practical thickness measurements based on commercial portable tools, nor is it implied that thickness measurements made by the two procedures will agree exactly.

4. Apparatus

4.1 *Gage,* equipped with a dial micrometer, a flat anvil, and a presser foot loaded by a dead mass.[3]

4.2 *Dial,* graduated to read to the nearest 0.01 mm, with small second dial graduated to read to the nearest 1 mm or to the nearest 0.001 in. and 0.1 in. respectively.

4.3 *Anvil,* flat, with a diameter of 0.395 ± 0.02 in. (10 ± 0.5 mm) and projecting 0.1 in. (2.5 mm) from the surface of a flat circular platform about 2 in. (50 mm) in diameter.

4.4 *Presser Foot,* having a flat surface 0.395 ± 0.02 in. (10 ± 0.5 mm) in diameter, and can be lifted by a lever at least 13 mm or 0.5 in. It shall be dead-mass loaded to exert a total load of 13.86 ± 0.35 oz (393 ± 10 g) on the specimen. The load is equivalent to 500 g/cm^2. The contacting surface of the presser foot and the surface of the anvil shall be parallel within 0.0001 in. (0.0025 mm).

5. Test Specimen

5.1 The test specimen shall be a piece of leather that has been conditioned according to Practice D1610 and cut to the dimensions required for the particular physical test.

[1] This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of Subcommittee D31.07 on Physical Properties. This test method was developed in cooperation with the American Leather Chemists ~~Assn~~Association (Standard Method ~~E4–1983).~~E4–1983).

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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 sole source of supply of the dead-mass type gage known to the committee at this time is B.C. Ames, Model #70-1355 (formerly Frank E. Randall Co., Inc.) 1644 Concord Street, Framingham, MA 01701. 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,[1] which you may attend.