



Designation: D2208 – 00 (Reapproved 2010)

## Standard Test Method for Breaking Strength of Leather by the Grab Method<sup>1</sup>

This standard is issued under the fixed designation D2208; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

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

### 1. Scope

1.1 This test method covers the determination of the breaking strength of leather by the grab method. It is intended for use on light, soft leathers; boarded, sueded, or embossed leathers tested on a specimen in the form of a rectangle piece; narrow strap, welt, lace, and round belt leathers; or other leathers that cannot be accurately tested by Test Method D2209. This test method does not apply to wet blue.

1.2 The test method is not recommended for breaking loads over 500 lbf (2200 N) because of slippage of the specimen in the jaws.

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

1.4 *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>

D1517 Terminology Relating to Leather

D1610 Practice for Conditioning Leather and Leather Products for Testing

D1813 Test Method for Measuring Thickness of Leather Test Specimens

D2209 Test Method for Tensile Strength of Leather

D2211 Test Method for Elongation of Leather

### 3. Terminology

3.1 For definitions of leather terms used in this standard, refer to Terminology D1517.

### 4. Summary of Test Method

4.1 The leather specimen is clamped in the test machine as described in Test Method D2209. The force required to rupture the leather at a jaw separation of  $10 \pm 2$  in./min is measured, along with the percent elongation at rupture.

### 5. Significance and Use

5.1 The measurement of the strength of leather is often necessary in order to determine its suitability for its intended application. This test method is recommended for use on light, soft leathers, narrow strap, welt, lace and round belt leathers as well as others that cannot be accurately tested by Test Method D2209.

### 6. Apparatus

6.1 *Testing Machine*, as described in Test Method D2209.

NOTE 1—The face of one jaw of each clamp shall measure 1 by 1 in. (25.4 by 25.4 mm) and that of the other shall measure 1 by 1½ (25.4 by 38 mm) or more for testing specimens wider than the jaws only.

6.2 *Thickness Gage*—A dead-mass type of thickness gage as described in Test Method D1813.

6.3 *Steel Scale*, graduated to read in 0.02 in. (0.5 mm).

### 7. Sampling, Test Specimens, and Test Units

7.1 For testing specimens wider than the jaws, the specimen for wide, flat leathers shall be a small piece of leather 6 in. (152 mm) long and 3 in. (76 mm) wide. The direction of the long dimension relative to the backbone shall be noted.

7.2 For testing specimens cut from narrow strip, the specimen for narrow strap, welt, lace, and round belt leathers shall be a piece of leather 6 in. (152 mm) long.

### 8. Conditioning

8.1 All samples shall be conditioned for 48 h in standard atmospheric conditioning and tested under these conditions as described in Practice D1610.

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of D31.05 on Upholstery. This test method was developed in cooperation with the American Leather Chemists Assn. (Standards Method E16–1965).

Current edition approved April 1, 2010. Published May 2010. Originally approved in 1963. Last previous edition approved in 2005 as D2208–00 (2005). DOI: 10.1520/D2208-00R10.

<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.