Designation: D7912 – 14

Standard Test Method for Resistance of Finish to Heat Aging (Finish Stability)[1]

This standard is issued under the fixed designation D7912; 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 covers the determination of resistance of leather finish to cracking, flaking or becoming tacky after aging.

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

1.3 *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:*[2]

D1517 Terminology Relating to Leather

D1610 Practice for Conditioning Leather and Leather Products for Testing

D2813 Practice for Sampling Leather for Physical and Chemical Tests

2.2 *Federal Test Method:*[3]

Standard No 311 Method 3202 Finish Stability

3. Terminology

3.1 *Definitions*—For definitions of leather terms see Terminology D1517.

4. Summary of Test Method

4.1 In this test method the finish is visually examined after the test specimen is exposed to prolonged heating, followed by manual flexing of the specimen.

5. Significance and Use

5.1 This test method is intended for use on all types of finished leathers.

5.2 Finish stability is a significant factor in establishing the application and function of leather.

6. Apparatus

6.1 *Forced Circulating Air Oven,* capable of maintaining a temperature of 55 to 60°C with a thermo regulator system capable of holding oven temperature within ±2°C of set point. A thermometer accurate to ±2°C should be used to check and monitor the oven set point.

6.2 *Steel Stamp Die,* 10 + 2 cm^2.

7. Sampling, Test Specimens, and Test Units

7.1 *Primary Sampling Unit*—The leather shall be sampled in accordance with Practice D2813.

7.2 Suggested sample size is 10 cm^2.

NOTE 1—If necessary, small size may be used. Sample size used should be included in the report.

8. Preparation of Apparatus

8.1 Preheat the oven (6.1) to the desired temperature.

9. Conditioning

9.1 Prior to cutting the specimens, condition the leather in accordance with Practice D1610.

10. Procedure

10.1 Place the specimen to be tested in the circulating air oven maintained at a temperature of 55 to 60°C, hanging it so that complete circulation of the air around the specimen is possible. Expose the specimen in this manner for 24 ± ¼ h and then allow it to cool. After cooling, double the aged leather over with the grain side in, crease the folded edge by hand slightly, and rub the finish grain surface together. Examine the grain surface for cracks, parting of the finish from the leather, and tackiness.

11. Report

11.1 The presence of cracks, parting of the finish from the leather, or tackiness shall be reported.

[1] This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of Subcommittee D31.05 on Upholstery. This test method is adopted from the FTMS 311 Method 3202.

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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] Available from http://www.everyspec.com/FED-STD/FED-STD-311_9423/

11.2 Report sample size used.

12. Precision and Bias

12.1 This test method is adopted from the procurement procedures of the Federal Government (Federal Test Method Standard No 311), where it has long been in used and where it was approved for publication before the inclusion of precision and bias statement were mandated. The original inter-laboratory test data is no longer available. The user is cautioned to verify by use of reference material, if available, that the precision and bias of this test method is adequate for the contemplated use.

13. Keywords

13.1 aging; cracking; finish; leather; tackiness