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ASTM D 4925

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Standard Test Method for Flexibility and Adhesion of Finish on Leather¹

This standard is issued under the fixed designation D 4925; 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 is intended for use on finished upper leather, for shoes or similar end use, or the leather article, such as a shoe or handbag, to measure flexibility and adhesion of finish on the leather.

1.2 *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety problems 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. Apparatus and Reagents

2.1 *Air Tight Oven*, at $110^{\circ}\text{F} \pm 5^{\circ}\text{F}$ ($43^{\circ}\text{C} \pm 3^{\circ}\text{C}$).

2.2 *Calcium chloride*, as desiccant, spread thinly over at least 50 % of surface area in a tray near bottom of oven.

2.3 *Desiccator*, at room temperature with calcium chloride as desiccant.

3. Procedure

3.1 Place sample in the oven at $110^{\circ}\text{F} \pm 5^{\circ}\text{F}$ ($43^{\circ}\text{C} \pm 3^{\circ}\text{C}$)

for 24 h. After this period remove sample from the oven and place in a desiccator at room temperature for 2 h. After removing from the desiccator, bend the sample sharply by hand at a 180° angle with the finish side on the inside of the bend, pressing tightly together with the fingers and rolling back and forth for three complete cycles, a distance of approximately 0.25 in. Examine for finish cracks.

4. Report

4.1 Visually observe flexibility and report as one of the following: no cracking, slight cracking, or considerable cracking.

4.2 Visually observe adhesion for looseness of finish that can be wiped off with fingers and report as one of the following: good, fair, or poor.

5. Precision and Bias

5.1 This test method is adopted from the procedures of the American Leather Chemists Association² where it has been in use and where it was approved for publication before the inclusion of precision and bias statements were mandated. The original interlaboratory test data is no longer available. The user is cautioned to verify by the use of reference materials, if available, that the precision and bias of this test method is adequate for the contemplated use.

¹ This test method is under the jurisdiction of ASTM Committee D-31 on Leather and is the direct responsibility of Subcommittee D31.07 on Physical Properties—General.

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² American Leather Chemists Assn., Office of Secretary-Treasurer, Campus Station, Cincinnati, OH 45221.

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