



Standard Test Method for Determining Slump Resistance of Carpet Adhesives¹

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1. Scope

1.1 This test method describes a procedure to measure slump, or sag, resistance of a trowel-grade carpet adhesive using a button slump test apparatus.

1.2 This test method provides a visual evaluation to relate troweled bead profile and trowel pickup.

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:²

D 618 Practice for Conditioning Plastics for Testing

D 907 Terminology of Adhesives

D 2202 Test Method for Slump of Sealants

3. Terminology

3.1 *Definitions*—Many of the terms in this test method are defined in Terminology D 907.

4. Significance and Use

4.1 During application, end users typically remove the adhesive from the container using the trowel and spread it onto the desired substrate. Adhesives with good rheological characteristics, therefore, will allow trowel retention. Adhesives with poor rheological characteristics tend to be unacceptable because they cannot be picked up by a trowel.

4.2 Bead configuration is important in order to provide proper wetting/contact of the carpet backing. Beads drawn with a trowel, which show a nonslumping ridge, are preferred because they allow good contact to both substrates.

4.3 Measurement of the slump resistance of the adhesive will allow an end user to know if an adhesive is capable of both adhering well to the trowel during application and maintain a nonflowing adhesive ridge.

5. Apparatus

5.1 *Slump Test Jig*, constructed in accordance with Test Method D 2202.

5.2 *Gravity Convection Oven*, having a temperature controlled at $122 \pm 3.6^\circ\text{F}$ ($50 \pm 2^\circ\text{C}$).

5.3 *Steel Spatula*.

6. Materials

6.1 *Adhesive*—Any appropriate adhesive used to install floorcovering.

6.2 *Solvent*—Any appropriate reagent.

7. Conditioning

7.1 Condition the slump jig and adhesive to be tested 24 h at $73.4 \pm 3.6^\circ\text{F}$ ($23 \pm 2^\circ\text{C}$) and $50\% \pm 5\%$ relative humidity prior to testing.

8. Procedure

8.1 Place the slump jig on a level table with the front face upward and the plunger depressed to the limit of its travel.

8.2 Apply the adhesive into the cavity of the slump jig. Use a steel spatula to level the adhesive flush with the surface of the test jig.

8.3 Place the jig immediately on its end and advance the plunger to one half of its maximum travel, $\frac{3}{16}$ in. (4.75 mm).

8.4 Place the jig immediately in a vertical position on a level shelf in the oven and condition it 30 min at $122.0 \pm 3.6^\circ\text{F}$ ($50 \pm 2^\circ\text{C}$) or at a temperature otherwise agreed upon between the supplier and the tester.

8.5 At the end of the 30-min period, take a reading, to the nearest 0.01 in. (0.2 mm) of the maximum point of flow of the adhesive.

8.6 Clean the jig using an appropriate solvent.

9. Report

9.1 Report the following information:

9.1.1 The type of adhesive used.

9.1.2 The slump resistance of the adhesive.

9.1.3 The test conditions.

¹ This test method is under the jurisdiction of ASTM Committee D14 on Adhesives and is the direct responsibility of Subcommittee D14.70 on Construction Adhesives.

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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.

10. Precision and Bias

10.1 The precision and bias of this test method for measuring the slump resistance of carpet adhesives is essentially as specified in Test Method D 2202.

11. Keywords

11.1 adhesive; floorcovering; slump resistance

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