



Designation: D5636/D5636M – 94 (Reapproved 2022)

Standard Test Method for Low-Temperature Unrolling of Felt or Sheet Roofing and Waterproofing Materials¹

This standard is issued under the fixed designation D5636/D5636M; 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 procedure for the physical testing and analysis of surface cracking due to low-temperature unrolling of roofing composed of bituminous impregnated felts and reinforced polymer-modified bituminous sheet materials. These products may employ various surfacing materials on one side.

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the 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, health, and 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

D1079 Terminology Relating to Roofing and Waterproofing

3. Terminology

3.1 *Definitions*—For definitions of terms used in this test method, see Terminology D1079.

¹ This test method is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.20 on Roofing Membrane Systems.

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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.

4. Summary of Test Method

4.1 The felt or sheet roofing or waterproofing material roll is temperature conditioned. Specimens are then taken from the roll, wrapped around a mandrel, temperature conditioned, unrolled, and inspected for cracking.

5. Significance and Use

5.1 Since felts or sheet roofing or waterproofing materials are brought to the roof in a roll and unrolled, this test method simulates felt or membrane behavior under actual field conditions during the unrolling process.

5.2 This test method is designed to aid those interested in the physical properties of roofing and waterproofing felts and sheet materials.

5.3 This test method enables a researcher to measure the relative behavior of low-temperature unrolling of roofing and waterproofing felt or sheet materials under laboratory conditions.

5.4 The data obtained from this test method will not permit service life prediction or the ability of the material to be installed at the tested temperature. Unrolling capabilities are important during application, and the temperature at the time of unrolling is believed to affect the performance of roofing and waterproofing membranes. However, the actual link between the test data and performance is unknown and is dependent on the materials and exposure.

6. Apparatus

6.1 The mandrel for the test procedure is a ± 80 mm [3.125 in.] outer diameter (Schedule 30) PVC pipe, a minimum ± 250 mm [10.0 in.] in length.

7. Test Method

7.1 *Unrolling at Low Temperatures*—This test method determines the temperature at which no cracking is observed in the felt or sheet roofing or waterproofing materials after unrolling at the test temperature from a ± 80 mm [3.125 in.] diameter mandrel.

7.2 Sampling:

7.2.1 The specimens are to be taken from a roll of roofing or waterproofing materials conditioned at 23 ± 3 °C