



Designation: D7274 – 06a (Reapproved 2018)<sup>ε1</sup>

# Standard Test Method for Mineral Stabilizer Content of Prefabricated Bituminous Geomembranes (PBGMs)<sup>1</sup>

This standard is issued under the fixed designation D7274; 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.

<sup>ε1</sup> NOTE—"BGM" was editorially changed to "PBGM" in February 2018.

## 1. Scope

1.1 This test method covers the procedure for the determination of mineral stabilizer content in prefabricated bituminous geomembranes (PBGMs) by calcination.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

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:*<sup>2</sup>

- D4354 Practice for Sampling of Geosynthetics and Rolled Erosion Control Products (RECPs) for Testing
- D4439 Terminology for Geosynthetics
- D6455 Guide for the Selection of Test Methods for Prefabricated Bituminous Geomembranes (PBGMs)

## 3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *prefabricated bituminous geomembrane (PBGM), n*—a material fabricated in a plant and consisting principally of

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D35 on Geosynthetics and is the direct responsibility of Subcommittee D35.10 on Geomembranes.

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<sup>2</sup> 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.

nonwoven polyester textile, impregnated by a blend of oxidized or polymer-modified bitumen incorporating filler.

3.1.2 *mineral stabilizer, n*—a fine, water-insoluble inorganic material, used in admixture with solid or semisolid bituminous materials.

3.2 For definitions of other terms used in this test method, refer to Terminology D4439.

## 4. Significance and Use

4.1 Bituminous geomembranes, whether made from oxidized or polymer-modified bitumen, may contain a significant amount of mineral stabilizer. The amount of mineral stabilizer used in a bituminous geomembrane has an effect on several physical properties, including but not limited to cold temperature, flexibility, and asphalt penetration (see Guide D6455 for a list of PBGM properties).

## 5. Apparatus

- 5.1 *Porcelain Crucible*, 30-cm<sup>3</sup> capacity, or equivalent.
- 5.2 *Analytical Balance*, capable of weighing to within  $\pm 0.001$  g.
- 5.3 *Bunsen Burner*.
- 5.4 *Muffle Furnace*, capable of maintaining a temperature of  $600 \pm 25$  °C ( $1110 \pm 45$  °F).

## 6. Hazards

6.1 Calcination of PBGM involves the use of open flame and will produce black smoke. This procedure should be carried out under a fume hood, away from any flammable material.

## 7. Sampling and Conditioning

7.1 Sampling shall be conducted according to Practice D4354.

7.2 Remove any surface material from the sample at the location where the test specimen will be taken. This operation will be easier when location is chosen on the side of the PBGM