



Designation: D7557/D7557M – 09 (Reapproved 2021)

Standard Practice for Sampling of Expanded Polystyrene Geof foam Specimens¹

This standard is issued under the fixed designation D7557/D7557M; 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 practice provides guidance on the location, frequency, and method of sampling representative specimens from large blocks of expanded polystyrene (EPS) geof foam.

1.2 This practice is not intended to replace professional judgment, nor should this guide be applied without consideration of a project's many unique aspects.

1.3 The word "standard" in the title of this guide means only that this guide has been approved through the ASTM International consensus process.

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

1.5 *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.*

1.6 *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

D4439 Terminology for Geosynthetics

D6817/D6817M Specification for Rigid Cellular Polystyrene Geof foam

¹ This practice is under the jurisdiction of ASTM Committee D35 on Geosynthetics and is the direct responsibility of Subcommittee D35.06 on Geosynthetic Specifications.

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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.

2.2 *ISO Standard:*³

ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories

3. Terminology

3.1 *Definitions*—For definitions of general geosynthetic terms used in this standard, refer to Terminology D4439.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *geof foam lot*—a definite quantity of EPS geof foam manufactured under conditions of production that are considered uniform.

4. Summary of Practice

4.1 EPS geof foam is commonly used in geotechnical applications when an extremely lightweight material is required. This practice provides guidance for sampling EPS geof foam specimens for ongoing quality control compliance to Specification D6817/D6817M.

5. Significance and Use

5.1 This practice provides guidance on sampling of EPS geof foam in order to determine compliance to Specification D6817/D6817M.

6. Procedure

6.1 *Initial Sampling:*

6.1.1 Select samples of the EPS geof foam from a first production lot to ensure compliance with Specification D6817/D6817M. Selection of samples shall be as agreed upon between purchaser and supplier.

6.1.2 Initial sampling shall include sampling of three sets of specimens. The sets shall be selected from different regions of a single EPS geof foam block. The regions shall include the corners of the EPS geof foam block and the center of the EPS geof foam block as shown in Fig. 1.

NOTE 1—Some EPS geof foam suppliers may cut larger sized blocks into two or three smaller sized blocks. The smallest dimension of the block is the height.

6.1.3 A minimum of five specimens shall be cut from each of the three regions of the block. The specimens shall be

³ Available from International Organization for Standardization (ISO), 1, ch. de la Voie-Creuse, CP 56, CH-1211 Geneva 20, Switzerland, http://www.iso.org.

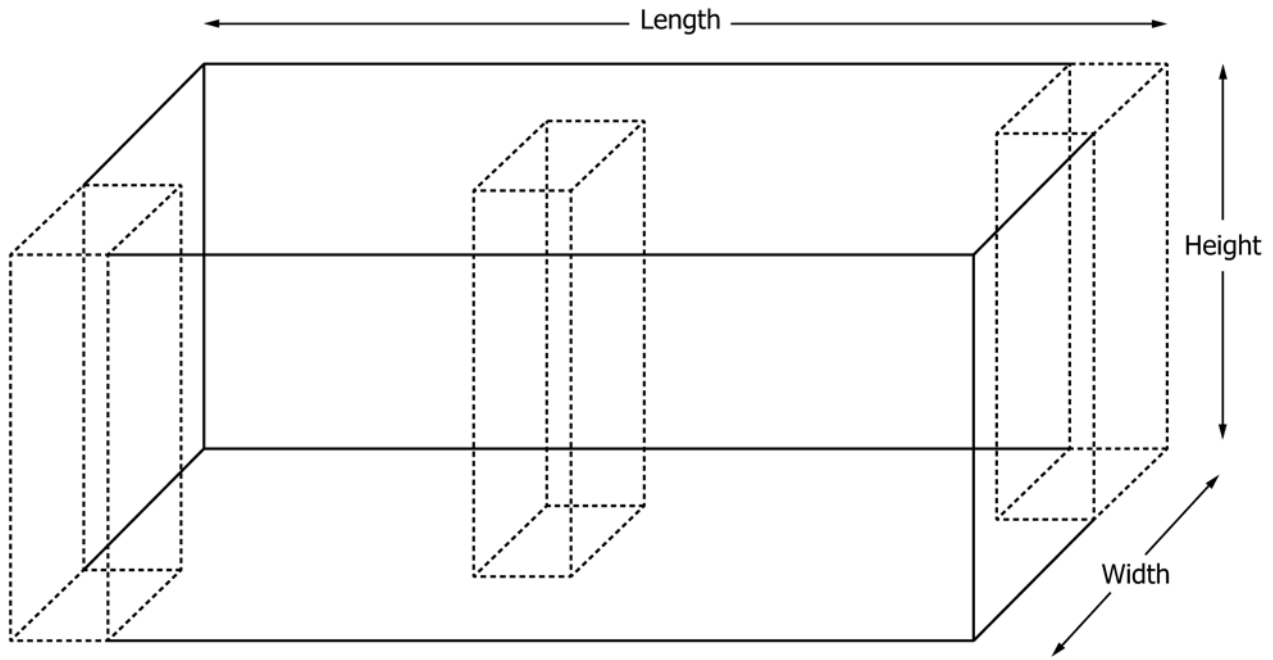


FIG. 1 EPS Geofoam Block Initial Sampling Locations

TABLE 1 EPS Geofoam Sampling Frequency

Initial Sampling	Ongoing Sample
1 block from first lot	1 block per each 500 m ³ [650 yd ³] for first 2000 m ³ [2600 yd ³] thereafter

distributed evenly through the height of the block. The specimens shall not be selected adjacent to the surface of the block.

6.1.4 The specimens shall be tested in accordance with Section 13.2 of Specification **D6817/D6817M**.

6.1.5 Testing shall be conducted by a test laboratory in compliance with ISO/IEC 17025.

6.1.6 The average compressive resistance for the five specimens shall meet the requirements of Table 1 of Specification **D6817/D6817M** for the type(s) tested. No individual sample result may be less than 90 % of the minimum requirement.

6.2 Ongoing Sample:

6.2.1 Select samples of the EPS geofoam from ongoing production lots at the frequency noted in **Table 1** to ensure compliance with Specification **D6817/D6817M**. Selection of samples shall be as agreed upon between purchaser and supplier.

6.2.2 Ongoing sampling shall include sampling of one set of specimens. The set shall be selected from a random region of a single EPS geofoam block.

6.2.3 A minimum of five specimens shall be cut from the random region of the block. The specimens shall be distributed evenly through the height of the block. The specimens shall not be selected adjacent to the surface of the block.

6.2.4 Sample testing shall be in accordance with **6.1.4 – 6.1.6**.

7. Keywords

7.1 EPS; expanded polystyrenes; geofoams; geofoam lots; rigid cellular polystyrenes

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