Designation: D7982 – 15 (Reapproved 2021)

Standard Practice for Testing of Factory Thermo-Fusion Seams for Fabricated Geomembrane Panels[1]

This standard is issued under the fixed designation D7982; 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 manufacturing quality control guidance for the factory seaming of fabricated geomembrane panels. This practice is not to be considered as all-encompassing since there are a large number of geomembrane types, weld types, and fabrication processes that cannot be anticipated and covered in this document.

1.2 This practice is written for factory-fabricated geomembrane panels only and does not apply to field fabrication onsite.

1.3 This practice does not cover joining of materials during the primary geomembrane manufacturing process such as the vulcanized overlaps found in EPDM sheet.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *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

D6392 Test Method for Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using Thermo-Fusion Methods

D7408 Specification for Non-Reinforced PVC (Polyvinyl Chloride) Geomembrane Seams

D7700 Guide for Selecting Test Methods for Geomembrane Seams

D7747/D7747M Test Method for Determining Integrity of Seams Produced Using Thermo-Fusion Methods for Reinforced Geomembranes by the Strip Tensile Method

D7749 Test Method for Determining Integrity of Seams Produced Using Thermo-Fusion Methods for Reinforced Geomembranes by the Grab Method

D7865 Guide for Identification, Packaging, Handling, Storage and Deployment of Fabricated Geomembrane Panels

3. Terminology

3.1 For definitions of terms related to geomembranes, refer to Terminology D4439.

3.2 *Definitions:*

3.2.1 *destructive test sample*—a seam sample taken before, during, or after production welding that is used to determine compliance of production seams with a specification.

3.2.2 *post-production test*—a destructive test sample tested at the conclusion of the manufacturing process (production seam or trial seam) to qualify the previously produced production seams.

3.2.3 *pre-production test*—a destructive test sample tested at the beginning of the manufacturing process to qualify subsequent production seams.

3.2.4 *production seam*—a factory seam that is made as part of a finished fabricated panel.

3.2.5 *trial seam*—a seam made prior to or after production welding, made by the same personnel, using the same geomembrane material, the same welding unit, and the same seaming conditions used in the actual production seaming process. Trial seams are used to provide destructive test samples without damaging production seams.

3.2.6 *welding unit*—each individual welding station or piece of welding equipment used to make a single seam.

4. Significance and Use

4.1 This practice is intended to aid fabricators, suppliers, purchasers, and users of fabricated panels in the testing requirements for factory-created seams during fabrication of geomembrane panels.

[1] This practice 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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[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.