



Designation: D 7008 – 03

Standard Specification for Geosynthetic Alternate Daily Covers¹

This standard is issued under the fixed designation D 7008; 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 specification covers the requirements for reusable and nonreusable geosynthetic alternate daily covers (ADCs) used on the working face of municipal solid waste landfills (MSWLF). Geosynthetic ADCs include a wide range of products including, but not limited to, reinforced film, unreinforced film, reinforced sheet, unreinforced sheet, coated geotextile and uncoated geotextile.

1.2 This standard addresses the base ADC materials and does not address grommets, straps or other fabricated parts.

1.3 The values stated in SI units are to be regarded as the standard.

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 requirements prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- D 882 Test Methods for Tensile Properties of Thin Plastic Sheeting
- D 1004 Test Method for Initial Tear Resistance of Plastic Film and Sheeting
- D 4355 Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus
- D 4439 Terminology for Geosynthetics
- D 4533 Test Method for Trapezoid Tearing Strength of Geotextiles
- D 4632 Test Method for Grab Breaking Load and Elongation of Geotextiles
- D 4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes and Related Products
- D 6523 Guide for Evaluation and Selection of Alternative Daily Covers (ADCs) for Sanitary Landfills
- E 96 Test Methods for Water Vapor Transmission of Materials

2.2 Other Standards:

National Fire Protection Association (NFPA) 701 Standard Methods of Fire Tests for Flame Propagation of Textiles
Geosynthetic Research Institute (GRI) Specification GM11 Accelerated Weathering of Geomembranes using a Fluorescent UVA-Condensation Exposure Device

3. Terminology

3.1 *Definitions*—For definitions of terms related to geosynthetics, refer to Terminology D 4439.

3.1.1 *alternate daily cover, n*—an alternative to the traditional 15 cm (6 in.) soil cover required by the USEPA for landfill working faces to “control disease vectors, fires, odors, blowing litter, and scavenging, without presenting a threat to human health and the environment.”

3.1.2 *fire retardant, adj*—in geosynthetic ADCs, meeting the requirements of NFPA 701, Method 1, Standard Method of Fire Tests for Flame Propagation of Textiles and Films.

3.1.3 *nonreusable, adj*—in geosynthetics, a fabric or film intended to be placed once and then disposed of, discarded, or left in place.

3.1.4 *reusable, adj*—in geosynthetics, a fabric or membrane material intended to be retrieved and installed more than once to perform the cover function.

3.1.5 *working face, n*—the area of a landfill in which waste is actively being deposited.

4. Classification of Geosynthetic ADCs

4.1 *Nonreusable*—Nonreusable geosynthetic ADCs consist of disposable films or geotextiles, intended to be left in place without retrieval. Special equipment exists to facilitate the placement and anchoring of these materials to cover the working face of landfills. The cover may contain pro-degradant additives to accelerate degradation within the waste to allow the free flow of fluids and gases within the waste mass. Three classes of nonreusable ADCs are specified based on tensile, tear and puncture properties (see Table 1).

4.2 *Reusable*—Reusable geosynthetic ADCs consist of various types of fabric or plastic membranes that have either been developed or adapted for use as a daily cover material. Panels fabricated from these materials are placed over the working face at the end of the day, and retrieved prior to the start of the next operating day. Special mechanized equipment can be used to facilitate the placement and retrieval of panels. Three classes

¹ This specification is under the jurisdiction of ASTM Committee D35 on Geosynthetics and is the direct responsibility of Subcommittee D35.03 on Permeability and Filtration.

Current edition approved Dec. 1, 2003. Published February 2004..