Designation: D8057 – 17

Standard Specification for Inlet Filters with a Rigid Frame[1]

This standard is issued under the fixed designation D8057; 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 geosynthetic storm sewer inlet filters used in highway drainage, roadway, residential, commercial, and industrial applications. The inlet filter is comprised of a rigid frame and a removable geosynthetic sediment bag. The sediment bag hangs suspended from the rigid frame and includes a bypass that shall allow water flow into the drainage structure if the bag is completely filled with sediment. Water flow through the bypass shall equal or exceed the design flow of the inlet required at a specified drainage location.

1.2 The requirements of this specification are intended to provide an inlet filter system to collect sediment, trash, leaves, and other storm water contaminants from surface storm water runoff at drainage inlet locations during temporary site construction.

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 and health 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]

D4439 Terminology for Geosynthetics

D5141 Test Method for Determining Filtering Efficiency and Flow Rate of the Filtration Component of a Sediment Retention Device

D7351 Test Method for Determination of Sediment Retention Device Effectiveness in Sheet Flow Applications

2.2 *AASHTO Standards:*[3]

AASHTO M288 Geotextile Materials

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of terms relating to geosynthetics, refer to Terminology D4439.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *design flow rate of the inlet, n*—the design flow to the drainage structure.

3.2.2 *treatment flow rate, n*—the design flow that is intended to be filtered through the sediment bag.

4. Classification

4.1 *General*—This specification covers geosynthetic storm sewer inlet filters used in highway drainage, roadway, residential, commercial, and industrial applications. The inlet filter is comprised of a rigid frame and a removable geosynthetic sediment bag fixed to the frame by a positive connection with adequate strength to support the weight of the sediment bag when completely full.

4.2 This product can be used with round, rectangular, gutter, rolled curb, and curb inlet types.

5. Ordering Information

5.1 When ordering material in accordance with this specification, the following should be specified:

5.1.1 The inlet type, grate length and width, or diameter,

5.1.2 The inlet clear opening length and width, or diameter,

5.1.3 The frame materials,

5.1.4 The geosynthetic bag physical properties,

5.1.5 The geosynthetic bag volume capacity,

5.1.6 The treatment flow rate, and

5.1.7 The design flow rate of the inlet.

6. Materials and Manufacture

6.1 *Basic Materials*—These products are comprised of a rigid frame and geosynthetic sediment bag. The sediment bag

[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.

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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.

[3] Available from American Association of State Highway and Transportation Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001, http://www.transportation.org.