



Standard Practice for Installation of Geocomposite Pavement Drains¹

This standard is issued under the fixed designation D 6088; 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 covers recommendations and identifies pertinent areas of consideration for the installation of buried geocomposite drains used for highway edgedrains, underdrains, or other pavement drainage applications. These recommendations are intended as guidelines for developing a satisfactory construction and installation method to minimize installation-caused deformation or damage and to provide long-term performance of these products. It is also intended as a guideline for ensuring a stable underground environment for these materials under a wide range of service conditions. Because of the numerous and diverse product designs available and the inherent variability of natural ground conditions, achieving satisfactory performance of any one product may require review by the engineer and modification to provisions contained herein to meet specific project requirements.

1.2 The scope of this practice necessarily excludes product performance criteria such as compressibility in any plane, flow capacity, inlet capacity, or geotextile selection and use. It is, therefore, incumbent upon the product manufacturer, specifier, and project engineer to verify that the product specified for an intended application, when installed according to procedures outlined in this practice, will provide satisfactory long term performance according to criteria established by the owner for that application. A commentary of product performance and installation factors important in achieving a satisfactory installation is included in Appendix X1.

1.3 The values stated in SI units are to be regarded as the standard. The inch-pound units given in parentheses are for information only.

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 limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 8 Terminology Relating to Materials for Roads and Pavements²

D 420 Guide to Site Characterization for Engineering, Design, and Construction Purposes³

D 653 Terminology Relating to Soil, Rock, and Contained Fluids³

D 698 Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft · lbf/ft³, 600 kn·m/n³)³

D 2321 Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications⁴

D 2487 Classification of Soils for Engineering Purposes (Unified Soil Classification System)³

D 2488 Practice for Description and Identification of Soils (Visual-Manual Procedure)³

D 3839 Practice for Installation of “Fiberglass” (Glass-Fiber Reinforced) Thermosetting Resin Pipe⁴

D 4318 Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils³

D 4439 Terminology for Geosynthetics⁵

F 412 Terminology Relating to Plastic Piping Systems⁴

3. Terminology

3.1 Definitions:

3.1.1 Definitions used in this practice are in accordance with Terminologies F 412, D 8, and D 653 unless otherwise indicated.

3.2 Definitions:

3.2.1 *aggregate*—a granular material of mineral composition such as sand, gravel, shell, slag or crushed stone (see Terminology D 8).

3.2.2 *dense-graded aggregate*—an aggregate that has a particle size distribution such that, when it is compacted, the resulting voids between the aggregate particles, expressed as a percentage of the total space occupied by the material, are relatively small.

¹ This practice 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 *Annual Book of ASTM Standards*, Vol 04.03.

³ *Annual Book of ASTM Standards*, Vol 04.08.

⁴ *Annual Book of ASTM Standards*, Vol 08.04.

⁵ *Annual Book of ASTM Standards*, Vol 04.13.