



SECTION 1011

GEOTEXTILE

1011.1 Scope. This specification covers geotextile for use in subsurface drainage, sediment control, erosion control or as a permeable separator.

1011.2 Material. Geotextiles shall meet the physical and chemical requirements of AASHTO M 288 for the specified application except as modified herein.

1011.2.1 General.

1011.2.1.1 No specific permeability values are required.

1011.2.1.2 The U. S. Standard sieve number corresponding to the apparent opening size (AOS) shall not exceed 100 (150 μm) for geotextile used in contact with any soil with more than 50 percent passing the No. 200 (75 μm) sieve nor shall the AOS exceed 70 (212 μm) when used between any two dissimilar granular material, less than 50 percent passing the No. 200 (75 μm) sieve, or when used to control movement of fines from a granular backfill through structural joints or into a drain pipe.

1011.2.1.3 During shipment and storage, geotextiles shall be protected from direct sunlight, ultra-violet rays, temperatures greater than 140 F (60 C), mud, dust and debris.

1011.2.2 Type 1, Subsurface Drainage. Type 1 geotextile is intended for use in subsurface drainage as a filter to protect drainage media from clogging with fines from adjacent soil. Typical applications include lining of drainage trenches and wrapping drain pipes.

1011.2.2.1 The minimum permittivity shall be 1.3 sec^{-1} .

1011.2.2.2 The material may be either AASHTO Class A or Class B unless otherwise specified.

1011.2.2.3 When material is furnished in the form of a knitted or woven sock to be stretched to fit snugly around perforated pipe, the grab strength requirements for AASHTO Class B applications may be reduced by 33 percent provided the minimum elongation is greater than 50 percent.

1011.2.3 Type 2, Sediment Control. Type 2 geotextile is intended for use in supported or non-supported sediment control fencing.

1011.2.4 Type 3, Erosion Control. Type 3 geotextile is intended for uses such as erosion control of slopes and channels when placed under rock blanket, rock ditch liner, etc.

1011.2.4.1 The minimum permittivity shall be 1.0 sec^{-1} .

1011.2.4.2 The material may be either AASHTO Class A or Class B unless otherwise specified.

1011.2.5 Type 4, Separation. Type 4 geotextile is intended for use as a separation material to prevent mixing of dissimilar material and to control migration of backfill material through joints in structural elements. Typical applications include use between soil and select granular backfills behind retaining structures, box culvert joint wraps, placement behind mechanically stabilized earth wall facing panels, cover for drainage blankets and soil/rock fill separation in slide repairs.

1011.2.5.1 The minimum permittivity shall be 1.0 sec^{-1} .

1011.2.5.2 The material may be either high or medium survivability level unless otherwise specified.

1011.3 Certification and Acceptance.

1011.3.1 The contractor shall furnish a manufacturer's certification to the engineer, for each lot of material furnished stating the name of the manufacturer, the chemical composition of the filaments or yarns and certifying that the material supplied conform to all requirements specified. The certification shall include or have attached typical results of tests from specific lots for all specified requirements.

1011.3.2 Acceptance of the material will be based on the manufacturer's certification and upon the results of such tests as may be performed by the engineer.