

Section 02370**GEOTEXTILE****1.0 GENERAL****1.01 SECTION INCLUDES**

- A Geotextile, also called filter fabric, in applications such as under a granular fill, as a pipe embedment wrap, around the exterior of a tunnel liner, or around the foundations of pipeline structures.
- B References to Technical Specifications:
 - 1. Section 01200 – Measurement and Payment Procedures
 - 2. Section 01350 – Submittals
- C Referenced Standards:
 - 1. American Society for Testing and Materials (ASTM)
 - a. ASTM D 4632, Standard Test Method for Grab Breaking Load and Elongation of Geotextiles”
 - b. ASTM D 4533, “Standard Test Method for Trapezoid Tearing Strength of Geotextiles”
 - c. ASTM D 4833, “Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products”
 - d. ASTM D 3786, “Standard Test Method for Hydraulic Bursting strength of Textile Fabrics”
 - e. ASTM D 4751, “Standard Test Method for Determining Apparent Opening Size of a Geotextile”
 - f. ASTM D 4491, “Standard Test Method for Water Permeability of Geotextiles by Permittivity”
 - 2. American Association of State Highway and Transportation Officials (AASHTO)

1.02 MEASUREMENT AND PAYMENT

- A Unless indicated as a Bid Item, no separate payment will be made for work performed under this Section. Include cost in Bid Items for Work requiring geotextile.
- B If Geotextile is included as a Bid Item, measurement will be based on the Units shown in Section 00300 – Bid Proposal and in accordance with Section 01200 – Measurement and Payment Procedures.

1.03 SUBMITTALS

- A Make Submittals required by this Section under the provisions of Section 01350 – Submittals.
- B Submit the standard manufacturer's catalog sheets and other pertinent information, for approval, prior to installation.

- C Submit installation methods, as a part of the work plan for tunneling or for excavation and backfill for utilities. Obtain approval from Engineer for Geotextile material and the proposed installation method prior to use of the geotextile.

2.0 PRODUCTS

2.01 GEOTEXTILE

- A Provide a geotextile (filter fabric) designed for use in geotechnical applications which forms a permeable layer or media while retaining the soil matrix.
- B Use a fabric which meets the physical requirements for Class A Subsurface Drainage installation conditions as defined in AASHTO M288 and as specified in this Section, 2.02 "Properties".

2.02 PROPERTIES

- A Material: Non-woven, non-biodegradable, fabric consisting only of continuous chain polymer filaments or yarns, at least 85 percent by weight poly-olefins, polyesters or polyamide, formed into a dimensionally stable network.
- B Chemical Resistance: Inert to commonly encountered chemicals and hydrocarbons over a pH range of 3 to 12.
- C Physical Resistance: Resistant to mildew and rot, ultraviolet light exposure, insects and rodents.
- D Minimum Test Values:

PROPERTY	VALUE (MIN)	TEST METHOD
Grab strength	180 lbs	ASTM D 4632
Trapezoidal Tear Strength	50 lbs	ASTM D 4533
Puncture Strength	80 lbs	ASTM D 4833
Mullen Burst Strength	290 psi	ASTM D 3786
Apparent Opening Size ⁽¹⁾	0.25 mm	ASTM D 4751
Permittivity (sec ⁻¹)	0.2	ASTM D 4491

⁽¹⁾ Maximum average roll value

3.0 EXECUTION - Not used

END OF SECTION