

GEOTEXTILE CATEGORIES			
No.	Application	Symbol	Default Strength Class Based on AASHTO M-288
1	Subsurface Drainage	SD	2
2	Permanent Erosion	PE	Woven Monofilament is Class 2, All Nonwovens are Class 1
3	Separation	SE	Class 1 (Grab strength function of construction equipment and lift thickness)
4	Stabilization	ST	1
5	Temporary Silt Fence	F	

This list is governed by the most current book of SPECIFICATIONS entitled STANDARD SPECIFICATIONS and MATERIALS and the latest incorporated revisions or SPECIAL PROVISION INSERT (SPI).
<http://sha.md.gov/pages/ssp.aspx?PageId=854&lid=SSPJUL2008>.

LEGEND
<p>CLASS SD = subsurface drainage CLASS PE = permanent erosion CLASS SE= separation CLASS ST= stabilization CLASS F = temporary silt fence Application Class E has been eliminated</p> <p>SF =Slit film MF =Monofilament C= Combination HB= Heatbonded NP= Needlepunched W=Woven NW= Nonwoven</p>

Recommend Approval: _____ Team Leader Date _____ Division Chief Date	Maryland Department of Transportation State Highway Administration Office of Materials Technology MARYLAND STANDARD METHOD OF TESTS	
Approved: _____ Director Date	GEOTEXTILE ACCEPTANCE AND QUALITY ASSURANCE PROCEDURES	MSMT 732

SCOPE:

This procedure outlines the approval, project acceptance, and quality assurance process for Geotextiles used on Administration projects. All Geotextile materials shall be listed in the National Transportation Product Evaluation Program (NTPEP) for Geotextile products. Geosynthetics used for reinforcement applications have a separate approval process.

DEFINITIONS:

4A Certifications – Certification shall conform to TC 1.03 of the Maryland State Highway Administration’s (SHA) Standard Specifications for Construction and Materials. The certifications shall include the actual test data results for each of the listed Roll Numbers in conformance with Note 4A of The Office of Materials Technology’s (OMT)’s Sample Frequency Guide.

Bill of Lading – Shipping orders that indicate the origination, destination, material type and specific Roll Numbers being transported. The Bill of Lading refers to shipments from Manufacturer to Supplier/Distributor and from Supplier/Distributor to Administration project sites.

Minimum Average Roll Values (MARV) Letter – The letter contains the MARV for a specific geotextile as guaranteed by the Manufacturer on their letterhead. MARV data shall be updated at least every 24 months; signed and dated by an authorized company representative.

Roll Number – A code or designation which must be clearly stamped or labeled on each roll of material shipped to an Administration project. The Roll Numbers on the material shall match Roll Numbers listed on the Bill of Lading for the shipment.

GEOTEXTILE QUALITY CONTROL

MANUFACTURER:

The Manufacturer of the geotextile material is required to have the material tested by and the results published in the NTPEP Geotextile bulletin as specified in 921.09.01. It is the Manufacturers responsibility to comply with all NTPEP requirements to maintain the material’s listing in the current NTPEP Geotextile bulletin. A supplier/distributor supplying geotextiles under a private label arrangement shall have their product listed in the NTPEP Geotextile bulletin under the private label following NTPEP procedures.

The Manufacturer is responsible to furnish documentation that specifies the product name, NTPEP GTX number, style type, Maryland Application Class (MAC), and a Quality Control (QC) contact person for the product and guarantees Minimum Average Roll Values (MARV) for that product. Additionally, the Manufacturer shall supply a Bill of Lading and 4A Certifications showing the test results of all individual rolls of geotextile materials shipped to a Supplier/Distributor. The Manufacturer shall maintain records that demonstrate sources of polymer components and document their quality control program. Copies of these documents shall be provided upon request.

SUPPLIER/DISTRIBUTOR:

It is the responsibility of the Supplier/Distributor to obtain all the proper paper work from the Manufacturer including the MARV Letter, Roll numbers, and a Bill of Lading for all rolls of material received. A current MARV Letter for each product shall be forwarded to OMT – Soils and Aggregate Technology Division (SATD) for review prior to the material being considered eligible for use on any SHA project. The eligibility period will be 24 months from the date of the Manufacturer’s MARV Letter and submittal of an updated MARV Letter will be required after the 24 month period to maintain the material’s eligibility for use. The MARV Letter may be submitted via the Contractor attached to the source letter or it may be submitted directly by the Supplier/Distributor.

A copy of the 4A Certifications and a Bill of Lading must be delivered to the SHA Project site with the material. When a copy of the Manufacturer’s original Bill of Lading is used to cover shipment of material to an SHA Project, the specific roll numbers being delivered to that SHA Project must be highlighted, circled or otherwise indicated and the SHA Project’s Contract Number must be noted as the shipping destination. The Supplier/Distributor shall ensure that the geotextile material is in conformance with the requirements of the Standard Specifications and the NTPEP agreement.

CONTRACTOR:

The Contractor shall submit a source of supply letter to the Area Materials Engineer with the name of the Supplier/Distributor of the geotextile. The source letter must provide:

1. NTPEP listed Manufacturer, GTX number, and Style
2. Contract Item No., specific use, and MAC as specified in section 921.09

In addition to the source of supply letter requirements, the 4A Certifications and a Bill of Lading for the specific roll numbers being used on a project shall be provided to the Project Engineer prior to material being used on an Administration project.

GEOTEXTILE QUALITY ASSURANCE AND ACCEPTANCE

SHA SOILS AND AGGREGATE TECHNOLOGY DIVISION:

The SATD maintains a Geotextile Qualified List which compares the most recently submitted MARV data for each product with the NTPEP listed test results and the Maryland Application Class requirements specified in Section 921.09. A product will be included on the list when MARV data is submitted by a Manufacturer, Supplier/Distributor, or Contractor and the product is listed in the NTPEP Geotextile Bulletin with test results that equal or exceed the MARV. The product will be checked off for each MAC where the MARV meet the Specifications. MARV Letter submissions will be stamped and returned to the sender indicating the MAC for which the material is eligible for use. The Geotextile Qualified List will be reviewed and updated when any of the following occur:

1. MARV Letter for a new product is received
2. Updated MARV Letter for an existing listed product is received
3. MARV Letter for a product older than 24 months
4. Updated NTPEP Geotextile Bulletin is published

An updated Geotextile Qualified List will be provided to all Area Materials Engineers whenever a change is made.

The SATD may obtain samples from the manufacturing plant, supplier/distributor warehouse, or contractor project site for any supplied material to perform a quality assurance testing program. The results of Quality Assurance (QA) testing may be used to confirm any documentation including MARV Letter and 4A Certifications provided for the subject material. Any discrepancies between QA test results and those reported on MARV Letters and/or 4A Certifications will be brought to the attention of the Manufacturer for resolution and may also be reported to NTPEP. The Manufacturer must provide written justification for any discrepancies. The Manufacturer's failure to adequately justify or resolve test result discrepancies may be cause for rejection of the material and removal of the product from the Geotextile Qualified List.

SHA AREA MATERIALS ENGINEER:

The Area Materials Engineer compares the information supplied in the source letter to the approved Geotextile Qualified List generated by the SATD.

1. If the source letter does not contain all information outlined in the **CONTRACTOR** section above will be returned to the Contractor for resubmission with the required information.
2. If the material shown on the source letter is listed on the Maryland Geotextile Eligibility List for the specified Application Class will be accepted with a Note 4A.
3. If the material shown on the source letter is listed on the Geotextile Qualified List but is not eligible for the specified Application Class will be rejected.

4. If the source letter includes a MARV Letter for a product not currently on the Geotextile Qualified List, the MARV Letter will be forwarded to the SATD for review and processing prior to approval of the source by the Area Materials Engineer.

The Area Materials Engineer will receive the 4A Certifications and include them in the Project file prior to geotextile materials clearance.

PROJECT SITE MATERIAL ACCEPTANCE

PROJECT ENGINEER:

The Project Engineer will verify that each roll of material delivered to a project is properly identified, either by a label on the geotextile or on the container or the core around which the geotextile is rolled. The 4A Certifications and a Bill of Lading shall accompany all rolls of material delivered to a project. If a roll is not properly labeled or listed by the 4A Certifications and the Bill of Lading it will be rejected by the Project Engineer immediately. The Project Engineer will forward all 4A Certifications to the Area Materials Engineer for materials clearance. The Project Engineer will ensure that the specified use and MAC for all geotextiles used on the project conform to the Contract Documents.

NOTE: Partially used rolls of materials from other projects are not acceptable for use on subsequent projects.