Recommend Approval: Amanuel Negassi 05/17/2023 **Assistant Division Chief** **Date** Intikhab Haider 05/17/2023 **Division Chief** **Date**	Maryland Department of Transportation State Highway Administration Office of Materials Technology MARYLAND STANDARD METHOD OF TESTS	
Approved: Ericmfrempong 05/18/2023 **Acting 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 AASHTO Product Evaluation and Audit Solutions : https://data.ntpep.org/GTX/Products. Geosynthetics used for reinforcement applications have a separate approval process.

DEFINITIONS:

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 original letterhead. The MARV letter shall include National Transportation Product Evaluation Program GTX Number, manufacturer's Plant code and label. MARV data shall be updated at least every 24 months; signed and dated by an authorized company representative.

Roll Number – A manufacturer's code or designation which must be clearly stamped or labeled at 16.4 feet interval 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:

Have the geotextile material tested by AASHTO Product Evaluation and Audit Solutions and the results published at https://data.ntpep.org/GTX/Products per Section 919 of MDOT-SHA's Standard Specifications for Construction and Materials. It is the Manufacturer's responsibility to comply with all AASHTO Product Evaluation and Audit Solutions requirements to maintain the material's listing on the current AASHTO Product Evaluation and Audit Solutions. A supplier/distributor supplying geotextiles under a private label arrangement shall have their product listed in the AASHTO Product Evaluation and Audit Solutions under the private label following AASHTO Product Evaluation and Audit Solutions procedures.

Furnish documentation that specify the product name, AASHTO Product Evaluation and Audit Solutions GTX number, style type, Maryland Application Class (MAC), and a Quality Control (QC) contact person and guarantee Minimum Average Roll Values (MARV) for that product to MDOT SHA. The Manufacturer shall disclose the products compliance with Build America Buy

America (BABA) requirements, on the MARV Letter. Products may be listed whether they are or are not BABA complaint. However, products that are not BABA compliant will not be eligible for certain projects.

Provide a Bill of Lading at the time of shipment to the supplier.

Maintain records that demonstrate sources of polymer components and document their quality control program. Provide copies of these documents upon request.

SUPPLIER/DISTRIBUTOR:

Obtain all the proper paperwork from the Manufacturer including the MARV letter, roll numbers (printed code on roll at 16.4 feet interval), and a Bill of Lading for all rolls of material received.

Forward a current MARV Letter for each product to the Office of Materials Technology's (OMT) Soils and Aggregate Technology Division (SATD) for review prior to the material being qualified for use on Administration projects. The qualification period will be 24 months from the date of the Manufacturer's MARV letter. Submittal of an updated MARV letter will be required after the 24-month period to maintain material qualification. The MARV letter may be submitted attached to the source letter via the Contractor or it may be submitted directly by the Supplier/Distributor.

Provide a copy of the Bill of Lading to Administration project sites with each roll of material. When a copy of the Manufacturer's original Bill of Lading is used to cover shipment of material to a project, the specific roll numbers delivered to that project must be highlighted, circled or otherwise indicated and the project's Contract Number must be noted as the shipping destination. The Supplier/Distributor shall ensure that the geotextile material is in conformance with Section 919 and AASHTO Product Evaluation and Audit Solutions requirements.

CONTRACTOR:

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. AASHTO Product Evaluation and Audit Solutions listed Manufacturer GTX number, Printed Code, Label and Style

2. Contract Item No., specific use, and MAC per Section 919.

Also provide a Bill of Lading for the specific roll numbers being used on a project to the Project Engineer prior to using the material on Administration projects.

GEOTEXTILE QUALITY ASSURANCE AND ACCEPTANCE

OMT SOILS AND AGGREGATE TECHNOLOGY DIVISION:

The SATD maintains a Geotextile Qualified Product List which compares the most recently submitted MARV data for each product with the AASHTO Product Evaluation and Audit Solutions listed test results and the Maryland Application Class (MAC) requirements specified in Section 919. 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 AASHTO Product Evaluation and Audit Solutions website 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 signed and returned to the sender indicating the MAC for which the material is qualified for use. The Geotextile Qualified List will be reviewed and updated when any of the following occurs:

1. A MARV Letter for a new product is received,

2. An updated MARV Letter for an existing listed product is received,

3. A MARV Letter for a product older than 24 months is received, or

4. The AASHTO Product Evaluation and Audit Solutions website is updated.

An updated Geotextile Qualified List will be provided to all Area Materials Engineers whenever a change is made. The list is also located at: https://roads.maryland.gov/OMT/geotextiles.pdf

SATD may obtain samples from the manufacturing plant, supplier/distributor warehouse, or 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 results provided for the subject material. Any discrepancies between QA test results and those reported on MARV letters will be brought to the attention of the Manufacturer for resolution and may be reported to AASHTO Product Evaluation and Audit Solutions. 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.

OMT 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. Source letters that do not contain all the information outlined in the **CONTRACTOR** section shall be returned to the Contractor for resubmission with the required information.

2. Materials shown on the source letter as listed on the Maryland Geotextile Qualified Product List for the specified Application Class will be accepted.

3. Materials shown on the source letter as listed on the Geotextile Qualified List but are not qualified for the specified Application Class will be rejected.

4. Source letters that include a MARV Letter for a product not currently on the Geotextile Qualified List shall be forwarded to the SATD and to OMT's New Products and Research Team for review and processing prior to source approval.

The Area Materials Engineer will receive and include MARV Letter and Bill of Lading 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 with a printed code or label at intervals of 16.4 feet per the MARV letter. Reject the roll if it is not imprinted or labeled with the manufacturer's plant code. A Bill of Lading shall accompany all rolls of material delivered to a project. Immediately reject all rolls not listed on the Bill of Lading. Forward all Bills of Lading to the Area Materials Engineer for materials clearance. Ensure that the specified use and MAC for all geotextiles used on the project are per specifications.

SHIPMENT AND STORAGE

1. Identify, ship and store geotextiles per ASTM D 4873. Product labels shall clearly show the manufacturer or supplier's name, style name, and roll number. Each shipping document shall include a notation certifying that the material is in accordance with the manufacturer's certification.

2. Each geotextile roll shall be wrapped with a material that will protect the geotextile, including the ends of the roll, from damage due to shipment, water, sunlight, and contamination. The protective wrapping shall be maintained during periods of shipment and storage. Each roll shall include an inner core made from different material that shall protect, ensure ease of handling, and prevent damage from forklifts or other equipment used to transfer or move the roll.

3. Geotextile rolls shall be elevated off the ground during storage and adequately covered to protect them from site construction damage, precipitation, extended ultraviolet radiation (sunlight), strong acids or bases, flames (including welding sparks), temperatures exceeding 71 C (160 F) and any other environmental conditions that may adversely affect the physical properties of the material.

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