



STATE HIGHWAY
ADMINISTRATION

SOILS AND AGGREGATES (SATD) UPDATE

PRESENTER(S)

BEN KNIPE – LABORATORY ENGINEER

DARREN SWIFT – ASSISTANT DIVISION CHIEF



AGGREGATE BULLETIN

AGGREGATE BULLETIN

- Published Quarterly – January, April, July, and, October
- 125 Quarries tested annually
 - 6 Coarse only, 40 fine only, 79 Both coarse and fine aggregate
- [Agg Bulletin](#)
- Amanuel Welderufael – SATD Aggregate Team Leader
(443) 572 – 5275
Awelderufael@mdot.maryland.gov



FURNISHED LANDSCAPING SOILS UPDATE

LANDSCAPE SOILS ELIGIBILITY LIST

- Published Quarterly – January, April, July, and, October
- Annual submittal period June 15- July 31*
- Maintains Furnished Topsoil and BSM
- Nutrient Management plans 3 months
- [Landscaping Soils](#)
- Intikhab Haider – SATD Soils Lab Team Leader
(443) 572 – 5055
ihaider2@mdot.maryland.gov

GEOTEXTILES QUALIFIED PRODUCTS LIST (QPL)

- Listing is maintained case by case (moving toward quarterly)
- [Geotextiles QPL](#)
- NTPEP members – used for qualification
- MSMT 732 updates (following slides)
- Benjamin Knipe – SATD Lab Engineer
(443) 572 – 5057
bknipe@mdot.maryland.gov



GEOTEXTILES PROGRAM IMPROVEMENTS

QUALITY CONTROL / ASSURANCE OUTLINE

MSMT 732

([HTTP://WWW.ROADS.MARYLAND.GOV/OMT/MSMT732.PDF](http://www.roads.maryland.gov/omt/msmt732.pdf))

QC

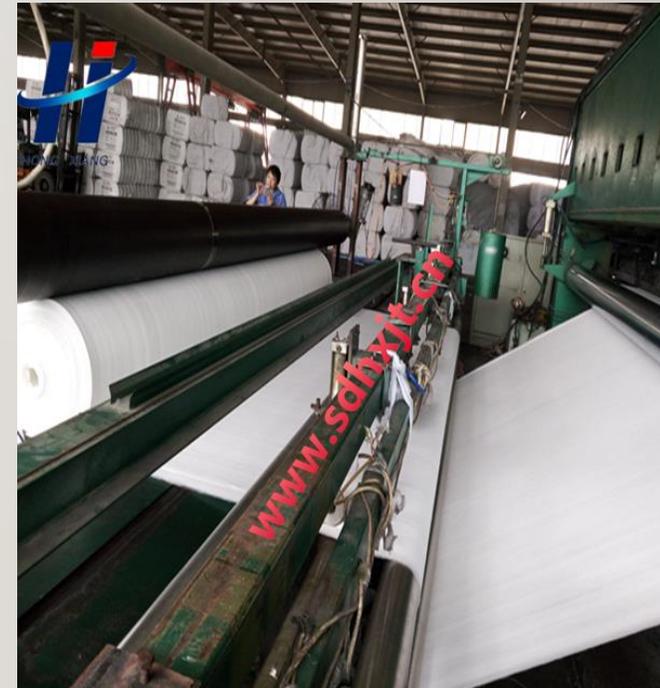
- Manufacturer Expectations
- Supplier/Distributor Expectations
- Contractor Expectations

QA

- Soils and Aggregates Technology Division Expectations
- Materials Management Division Expectations
- Project Engineer Expectations

MANUFACTURER EXPECTATIONS

- All geotextiles must have an up to date record in NTPEP with results published
- MARV Letter is good for 24 months (see example on next slide)
 - GTX #
 - Original signature
 - Geotextile style type
 - Intended application classes
- Bill of lading BOL for each roll
(**Origination, Destination, Type, Roll No**)
- Polymer sources documentation



October 18, 2017

Benjamin Knipe
Lab Engineer TE-2
Soils and Aggregate Technology Division
Maryland SHA

GTX#

MAC

Reference: TerraTex N08 for MD SHA requirements SD Types I,II, PE Type I, II,III Type SE & Type E
NTPEP GTX # 2016-01-056 Manufacture Codes: QA6D64XVLRRL 4TU2VE8HTC9H EYRHU2UDHH9S
M9KEBAWN2CWE LBBVFXR3NYTM ACFTZNP48380 2R4C4RVT2HT3 P9GBMAXXTN2Z
JZGPPV6KNSQJW SGSANCYMLCFT BLT5W4LOVIMM 7885VKUOPSWD XQZ3Y24MRBZ7
BH9DXW3BDONJ 9JMW6UJXCLLU FW9EJMFDXAMA RDTKWGDGEAWA YDUJW9Z89XWV 2R4C4RVT2HT3
RQ5NMMVJK34Z CDJQI49C9KKNV RQ5NMMVJK34Z

codes

Dear Mr. Knipe:

This letter is to certify that the TerraTex N08 meets the AASHTO M288 Class I, II, & III nonwoven geotextile requirements for drainage, separation and stabilization. TerraTex N08 is a nonwoven geotextile made up of polypropylene filaments. These filaments are needle-punched to form a stable and durable network such that the filaments retain their relative position. It is non-biodegradable and resistant to most soil chemicals, acids, and alkali with a pH range of 3 to 12. TerraTex N08 is manufactured to meet or exceed the following minimum average roll values:

PROPERTY	UNIT	ASTM TEST METHOD	Minimum Average Roll Values
Weight (Typical)	oz/yd ² (g/m ²)	ASTM D5261	8.0 (271)
Grab Tensile	lbs (kN)	ASTM D4632	205 (0.911)
Grab Elongation	%	ASTM D4632	50
Trapezoid Tear	lbs (kN)	ASTM D4533	85 (0.378)
Puncture Resistance	lbs (kN)	ASTM D4833	130 (0.578)
CBR Puncture	lbs (kN)	ASTM D6241	535 (2.38)
Mullen Burst	psi (kPa)	ASTM D3786	400 (2756)
Permittivity	sec ⁻¹	ASTM D4491	1.4
Water Flow	gpm/ft ² (l/min/m ²)	ASTM D4491	90 (3657)
A.O.S.	U.S. Sieve (mm)	ASTM D4751	80 (0.180)
U.V. Resistance	%/hrs	ASTM D4355	70/500

style

signature

SATD signature

Sincerely,

[Handwritten Signature]

Keith Harris
Technical Director

MD Application
PE Types I, II, III, SE
SD Types I, II, E

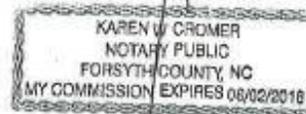
H-1
E - Inlet Protection

Benjamin J. Harris
11/20/17
Expires 11/30/19

I, Karen W. Cromer, hereby acknowledge that Keith Harris personally appeared before me this day and signed the foregoing instrument.

Notary *Karen W. Cromer*

Expiration Date: June 2, 2018



815 Buxton Street Winston Salem, NC 27101
888 - 239 - 4539 • Fax: 336 - 747 - 1652
www.hanesgeo.com info@hanesgeo.com

Expiration Date

Benjamin Knipe
Lab Engineer TE-2
Soils and Aggregate Technology Division
Maryland SHA

GTX#

MAC

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JZGIPV6KN5QJW SGSANCYMLCFT BLTSW4LOVHMM 7885VKUOPSWD XQZ3YZ4M7BZ7
6H0DXW3BDDNJ 9UMW6UJXCLU FW9EJMFDXAMA RDTKWG0GEAWA YDU3W8Z80XWV 2R4C4RVT2HT3
R05NMMVJK34Z CDJDI9C9KKNV R05NMMVJK34Z

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style

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CBH Puncture
Mullen Burst
Permittivity
Water Flow
A.O.S.
U.V. Resistance

lbs (kN)
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gpm/ft² (l/min/m²)
U.S. Sieve (mm)
%/hrs

ASTM D6241
ASTM D3786
ASTM D4491
ASTM D4491
ASTM D4751
ASTM D4355

535 (2.38)
400 (2756)
1.4
90 (3657)
80 (0.180)
70/500

signature

SATD
signature
↓

Sincerely,

Keith Harris
Technical Director

MD Application
HE Types I, II, III, SE
SD Types I & II, E

H-1
E - Inlet Protection

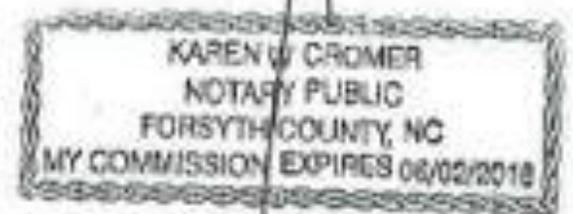
Benjamin J. King
11/21/17
Expires
11/30/19

I, Karen W. Cromer, hereby acknowledge that Keith Harris personally appeared before me this day and signed the foregoing instrument.

Notary Karen W Cromer

Expiration Date: June 2, 2018

815 Buxton Street Winston Salem, NC 27101
888 - 239 - 4539 • Fax: 336 - 747 - 1652
www.hanesgeo.com info@hanesgeo.com



Expiration Date

SUPPLIER / DISTRIBUTOR EXPECTATIONS

- Complete documentation is required (MARV Letter, Roll No. , BOL from Manuf.)
- MARV Letter to SATD for approval
- Provide BOL & MARV Letter/Roll to the PE upon each delivery.



CONTRACTOR EXPECTATIONS

- All geotextiles sourced through the Materials Management System , Qualified Products List
- The source letter shall include:
 - Product name (from QPL)
 - Specific use – Line Item
 - Maryland Application Class MAC – (Comments)
- Bill of lading shall be provided to the PE prior to placement
- Storage and Handling Section is added in the MSMT 732



SHIPMENT AND STORAGE (MSMT 732)- AASHTO M 288 REQUIREMENTS

- Identify, ship and store geotextiles per D 4873
- Properly wrapped
- Inner core
- Elevated off the ground during storage
- Adequately covered
- Do not store in areas where temperatures exceed 71 C (160 F)

SOILS AND AGGREGATES TECHNOLOGY DIVISION EXPECTATIONS

- Maintain and update the Geotextile QPL and MMS.
- Approve new and renew MARV Letters
- Review/Updates to the QPL when:
 - New product is submitted
 - Approval of a renewal
 - MARV letter that is out of date
- Random sampling and verification testing

Geotextile Field Sampling Checklist

Contract number: *WJ 225851*

Project Description: *Widened and Resurfacing for Md. 26 from Emerald Lane to Colvert Way*

GTX #: *2016-01-056*

Manufacturer: *Hanes Geo Components*

Product Name: *Serra Tex 708*

MARV Expiration date: *11-30-19*

MD Application Class: (SD) (SE) ST F (E)

Is roll test data provided? *yes*

Is the AASHTO code or ID printed at every 16.4' interval? *yes*

Does Material storage meet the M 288 requirement? *yes*

by Jim Trullinger - 301-471-9914

MATERIALS MANAGEMENT DIVISION EXPECTATIONS

- **APPROVE:**

- Material shown on the source letter as listed in the QPL

- **REJECT:**

- SOS not containing all information outlined in the contractor expectations.
- Materials shown on the SOS as listed in the QPL but are not sourced for the right MAC
- SOS including a MARV letter for a product not on the QPL

- **Products not on QPL but on SOS:**

- Forward info to SATD and the New Products team to review

- MARV Letters and Bill of Lading documentation will be received from the PE for materials clearance

PROJECT ENGINEER EXPECTATIONS

- Inspect each roll delivered:

- Bill of Lading
- MARV Letter (From SOS)
- Plant Code
- Product Label (Matches MARV Letter)



- See Section 919 for handling and storage details
- Incomplete/Incorrect documentation = Rejection
- Forward bill of lading to MMD for materials clearance.

HAZMAT/ NUCLEAR SAFETY REFRESHER TRAINING

- Nuclear Safety Refresher Training - Required Annually
 - Hazmat Training – Once every Three years
 - Nuclear Dosimeter Badges – Quarterly
- Due March 15, 2020
- Contacts / Questions?
 - Linda Gale – Asst. Division Chief SATD Field (443)572-5024 (443)695-0909 lgale@mdot.maryland.gov
 - Stuart Sommers – SATD Field Team Leader (443)695-0927 ssommers@mdot.maryland.gov
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Questions?