

ANALYSIS REPORT
SCC Accreditation No.: 40‡

Mr Dave Martin

Date: June 23, 2016

Quantum Group of Companies

Report: S1277-018-83573A

IDENTIFICATION: Polyurea on Foil: gravel height 2.5" with geotextile 8oz, gravel height 2.5" without geotextile, gravel height 3.5" with geotextile 8oz, gravel height 3.5" without geotextile, gravel height 4" with geotextile 8oz, gravel height 4" without geotextile
 Received: June 16, 2015

STANDARD:

TEST: Large Scale Hydrostatic Puncture Testing of Geosynthetics ASTM D5514/D5514M-14 Proc.B (mod)

TEST CONDITIONS: Conditioned sample(s) (21±2°C, 65±10% R.H.);
 Testing area: 0.283 m²; Diameter of test specimens: 600 mm;
 Tested July 10, 2015 to September 21, 2015

RESULTS: Individual Data Avg. S.D. % CV

gravel height 2.5" with geotextile 8oz

Thickness (mm): 1.77
 Gravel height (in): 2.5
 Observation (Pass or Fail): Pass
 Maximum pressure reached (psi): 100

gravel height 2.5" without geotextile

Thickness (mm): 2.02
 Gravel height (in): 2.5
 Observation (Pass or Fail): Pass
 Maximum pressure reached (psi): 100

gravel height 3.5" with geotextile 8oz

Thickness (mm): 2.01
 Gravel height (in): 3.0
 Observation (Pass or Fail): Pass
 Maximum pressure reached (psi): 45

Prepared by:


 Jonathan Trudel, Tech.
 Technician

Approved by: Amir Ershad Fanaei


 For: Eric Blond, Eng., M.Sc.A.
 Vice-President

Date: June 23, 2016

****For any information concerning this report, please contact Eric Blond****

The reports are identified by an alphanumeric code, the last character refers to the number of revision(s), this is emitted in ascending order. The samples in relation to this test are retained for a period of 30 days following the expedition day of the written report, unless other instructions are received. The fees for all services after the tests are 125.00 \$ per hour and for appraisal in Court, 195.00\$ per hour. The above reported results refer exclusively to the samples submitted for evaluation. This analysis report cannot be partly used or reproduced, unless in whole, without CTT Group prior written consent. ‡ CTT Group is accredited by the SCC for specific tests as listed on www.scc.ca. For customer's complete address, please refer to the front page.

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 Received: June 16, 2015

STANDARD:

TEST: Large Scale Hydrostatic Puncture Testing of Geosynthetics ASTM D5514/D5514M-14 Proc.B (mod)

RESULTS (CONT): Individual Data Avg. S.D. % CV

gravel height 3.5" without geotextile

Thickness (mm): 1.76

 Gravel height (in): 3.0

 Observation (Pass or Fail): Pass

 Maximum pressure reached (psi): 45

gravel height 4" with geotextile 8oz

Thickness (mm): 2.42

 Gravel height (in): 4.0

 Observation (Pass or Fail): Pass

 Maximum pressure reached (psi): 100

gravel height 4" without geotextile

Thickness (mm): 1.94

 Gravel height (in): 4.0

 Observation (Pass or Fail): Pass

 Maximum pressure reached (psi): 100

REMARKS: - The test was conducted with the aluminium side against the stones.

- See pictures in appendix.

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 Technician

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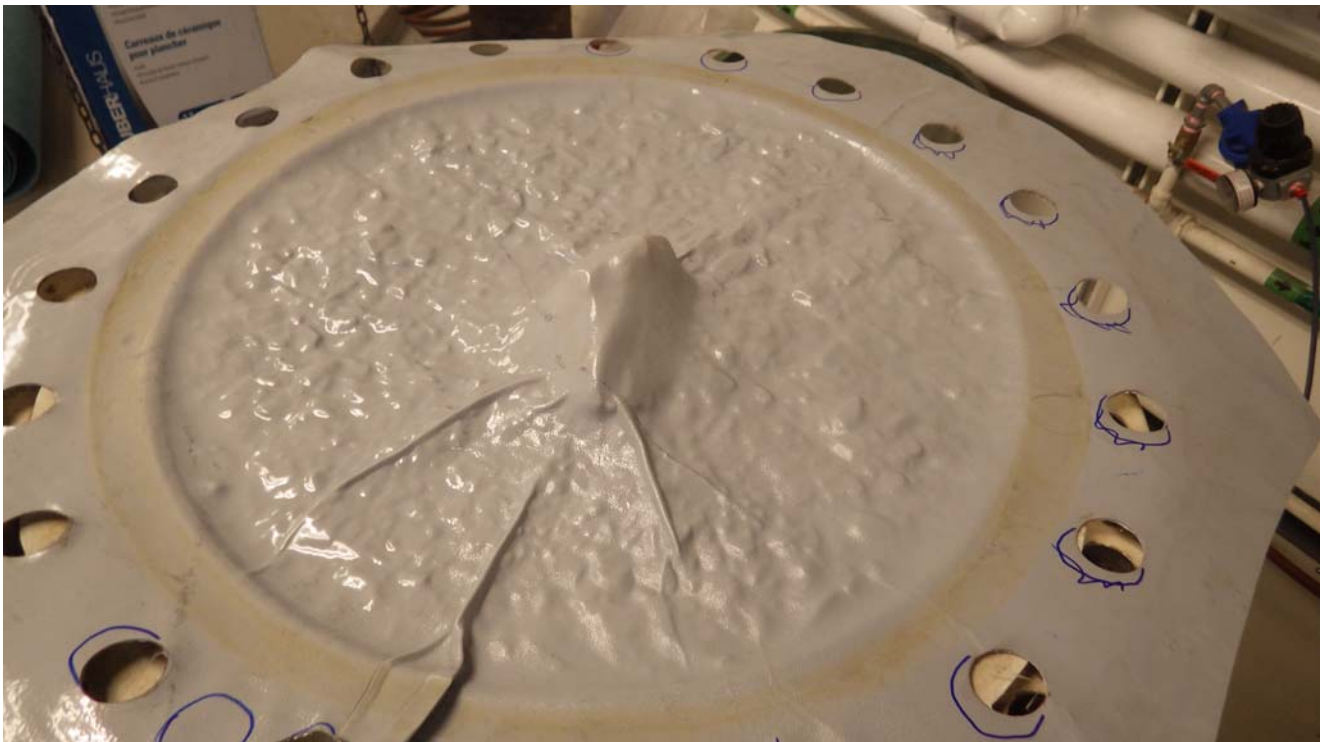
Gravel height 2.5 po



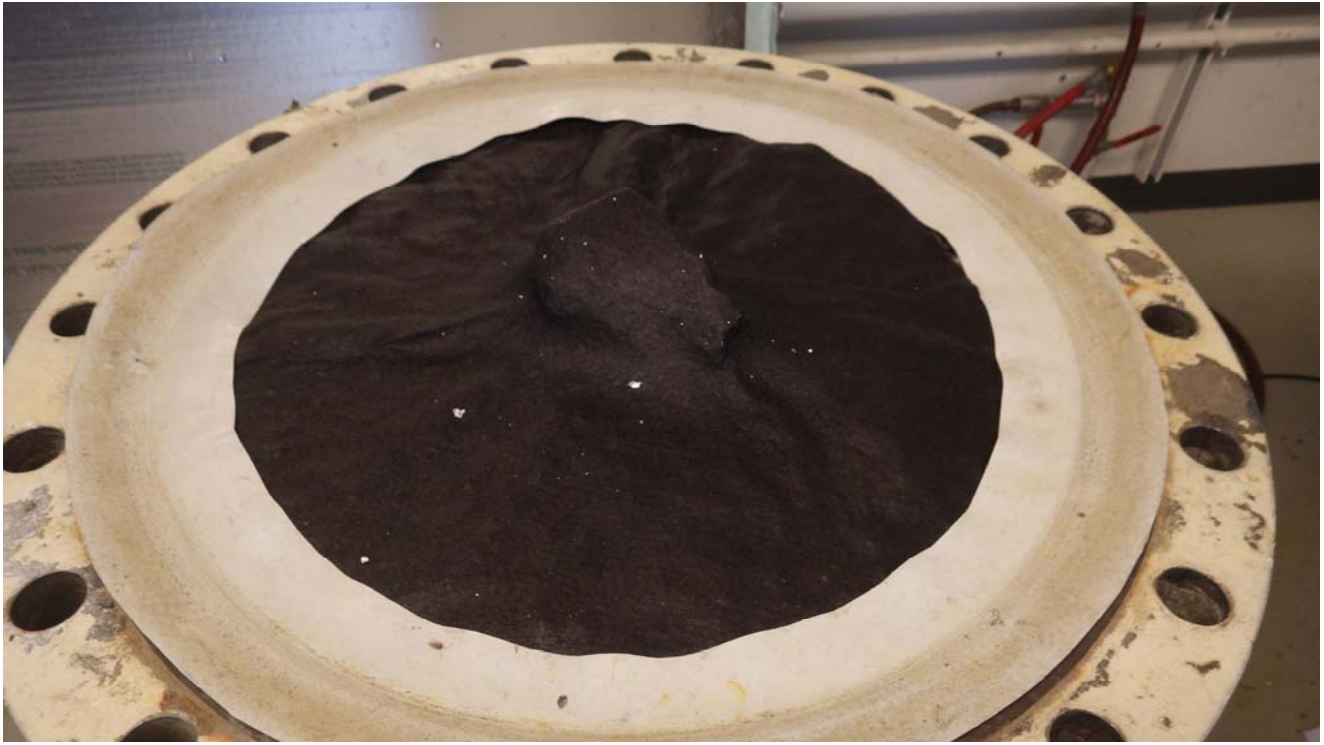
Gravel height 3.5 po



Gravel height 4 po



Gravel height 4 po



Gravel height 4 po with geotextile 8oz