



January 4, 2008  
January 22, 2008 (Revised )

**Mail To:**

**Mr. Thomas Palmer**  
**Sprayroq, Inc.**  
4707 Alton Court  
Birmingham, AL 35210-3744

phone: 205 957 0020  
e-mail: tpalmer@sprayroq.com

**Bill To:**

**<= Same**

Dear Dr. Palmer:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

TRI Job Reference Number: E2302-31-06

Material(s) Tested: 1 Poly 34540 Polyurethane Elastomer plaque

Test(s) Requested: Tensile Strength ( ASTM D 638 )  
Tear Resistance (ASTM D 624)  
Data Pending==> Water Vapor Transmission (ATSM E 96)  
Abrasion Resistance (ASTM D 4060)

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

Dr. Mansukh Patel  
Sr. Laboratory Coordinator  
Geosynthetic Services Division  
[www.GeosyntheticTesting.com](http://www.GeosyntheticTesting.com)

cc: Sam R. Allen, Vice President and Division Manager



**LABORATORY TEST RESULTS**

TRI Client: Sprayroq, Inc.

Material: Poly 34540 Polyurethane Elastomer  
 Sample Identification: 34540  
 TRI Log #: E2302-31-06

| PARAMETER  | TEST REPLICATE NUMBER   |       |       |       |       |   |   |   |   |    | MEAN | STD. DEV. |      |
|--|-------------------------|-------|-------|-------|-------|---|---|---|---|----|------|-----------|------|
|  | 1                       | 2     | 3     | 4     | 5     | 6 | 7 | 8 | 9 | 10 |      |           |      |
| <b>Tensile Properties (ASTM D 638, Type IV specimen)</b> |                         |       |       |       |       |   |   |   |   |    |      |           |      |
| ( WITH 1.3 INCH GAGE LENGTH)                             |                         |       |       |       |       |   |   |   |   |    |      |           |      |
| Tensile Break Strength (ppi)                             | 377                     | 429   | 460   | 429   | 417   |   |   |   |   |    |      | 422       | 30.1 |
| Tensile Break Strength (psi)                             | 2618                    | 2680  | 3049  | 2700  | 2895  |   |   |   |   |    |      | 2788      | 179  |
| Break Elongation (%)                                     | 108                     | 99    | 121   | 128   | 117   |   |   |   |   |    |      | 115       | 11   |
| Modulus ( psi )  | 21269                   | 19908 | 18329 | 13661 | 14846 |   |   |   |   |    |      | 17603     | 3257 |
| MD Machine Direction                                     | TD Transverse Direction |       |       |       |       |   |   |   |   |    |      |           |      |

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



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Material: Poly 34540 Polyurethane Elastomer  
 Sample Identification: 34540  
 TRI Log #: E2302-31-06

|  | 1                       | 2    | 3    | 4    | 5    |             | STD. |
|--|-------------------------|------|------|------|------|-------------|------|
| <b>Tear Resistance (ASTM D 624, Die C)</b> |                         |      |      |      |      |             |      |
| Tear Strength (lbs)                        | 95.7                    | 94.9 | 87.7 | 84.8 | 93.2 | <b>91.3</b> | 4.77 |
| Tear Strength (lb/in)                      | 610                     | 601  | 552  | 551  | 586  | <b>580</b>  | 27.4 |
| MD Machine Direction                       | TD Transverse Direction |      |      |      |      |             |      |

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**Material: Poly 34540 Polyurethane Elastomer**  
**Sample Identification: 34540**  
**TRI Log #: E2302-31-06**

| Water Vapor Transmission (ASTM E 96, Procedure BW) |                         | Data pending |       |
|--|-------------------------|--------------|-------|
| WVT (g/day/m <sup>2</sup> )                        | Data Pending            |              |       |
| WVT (g/hour/m <sup>2</sup> )                       | 0.000 0.000 0.000       | 0.000        | 0.000 |
| MD Machine Direction                               | TD Transverse Direction |              |       |

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**Taber Abrasion Test Report**  
**ASTM D 4060-95 ( as a guide, mod.)**

Client Name: Sprayroq, Inc. Test Date: 1/4/2008  
Sample ID: Poly 34540 Polyurethane Elastomer Technician: MPP  
Conditioning: As Supplied Model: Taber Abraser 5130  
TRI Log #: E2302-31-06

**Results**

| Number of Cycles | Test Material Identification | Initial Weight (mg) | Final Weight (mg) | Weight Loss (mg) | Wear Index (mg/1000 cycles) |
|------------------|------------------------------|---------------------|-------------------|------------------|-----------------------------|
| 0                | Polyurethane Plaque          | 36974               | *                 | *                | *                           |
| 1000             |                              | 36974               | 36938             | 36.0             | 36.0                        |
| 2000             |                              | 36938               | 36892             | 46.0             | 46.0                        |
| 3000             |                              | 36892               | 36868             | 24.0             | 24.0                        |
| 4000             |                              | 36868               | 36853             | 15.0             | 15.0                        |
| 5000             |                              | 36853               | 36800             | 53.0             | 53.0                        |
| Total Loss       |                              |                     |                   | 174              | mg                          |

Cycles required to give specified destruction: >5000

*Specific Destruction:*

Occurs when material suffers abrasion in such a manner as to wear through completely in any location in contact with the abrasive wheel.

**Parameters**

Abrasion Wheel: CS-17  
Weight Load (g): 1000 (g) / side  
Test Cycles: (max) 5000 or failure

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