# CONSTRUCTION MATERIALS
## TECHNOLOGIES

## LABORATORY TEST REPORT

**Report for:** Dymotek
7 Main St., P.O. Box 440
Ellington, CT 06029

**Attention:** Tom Trueb

| | | | |
|---|---|---|---|
| **Product Name:** | Roof Top Blox™ | **Manufacturer:** | Dymotek |
| **Project No.:** | DYMO-002-02-01 | **Source:** | Dymotek |
| **Date Received:** | January 23, 2013 | **Dates Tested:** | March 13 – September 19, 2013 |

**Purpose:** Determine the weathering properties of Roof Top Blox™ with the requirements found in the International Building Code, Section 1504.6: Physical Properties.

**Test Methods:** Testing was conducted in compliance with ASTM G 155-00a, G 155-04a, G 155-05: *Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.* Product samples were exposed to xenon arc weathering for a duration of 2,000h. Tensile testing was conducted in accordance with ASTM D 638-03: *Standard Test Method for Tensile Properties of Plastics*. Type I specimens were utilized; the speed of testing was 2.0 in./min.

**Sampling:** Specimens were excised from the Roof Top Blox™ injection molded polypropylene component for testing.





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**Results:**

Specimens examined under 5x magnification after 2,000h of xenon arc accelerated weathering did not exhibit any surface changes, such as delamination, cracking, checking, crazing, erosion, or chalking that might affect performance. Tensile strength (ASTM D 638) increased by 2.9% after material was exposed to 2,000h of xenon arc weathering.

Table 1: ASTM D 638 Tensile Properties

| Specimens | Max Force (lbf) | Max Stress (psi) | Elongation at Break (%) |
|---|---|---|---|
| Unexposed Control | | | |
| 1 | 135 | 2,747 | 53 |
| 2 | 129 | 2,675 | 41 |
| 3 | 134 | 2,691 | 44 |
| 4 | 142 | 2,273 | 46 |
| 5 | 138 | 2,690 | 34 |
| **Average** | **136** | **2,707** | **44** |
| **Std.Dev.** | **5** | **31** | **7** |
| Exposed (After 2,000h of Xenon Arc Exposure) | | | |
| 1 | 156 | 2,910 | 39 |
| 2 | 147 | 2,758 | 32 |
| 3 | 165 | 2,882 | 42 |
| 4 | 159 | 2,706 | 41 |
| 5 | 146 | 2,667 | 26 |
| **Average** | **155** | **2,785** | **36** |
| **Std.Dev.** | **8** | **107** | **7** |

**Statement of Compliance:**

Testing was conducted in accordance with ASTM G 155-00a, G 155-04a, G 155-05: *Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.* Tensile testing was conducted in accordance with ASTM D 638-03: *Standard Test Method for Tensile Properties of Plastics*. The laboratory test results presented in this report are representative of the material supplied.

Signed: Zachary R. Priest, P.E.
2013.10.08 13:59:17 -04'00'

Zachary R. Priest, P.E.
Director

**Report Issue History:**

| Issue # | Date | Pages | Revision Description (if applicable) |
|---|---|---|---|
| Original | 09/19/2013 | 3 | NA |
| Rev 1 | 10/08/2013 | 3 | Updated purpose |

**END OF REPORT**





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