



TEST REPORT

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Report Number: 1954-14001

Lab Project No.: 22948

Report Issued: March 28th, 2014

Client: Hydroblok Enterprises Ltd.
3031 230th Street
Langley, BC V2Z 3A9 Canada

Contact: Ken Koch

Source of Samples: The samples were shipped to IAPMO R&T Lab from Hydroblok Enterprises Ltd. and received in good condition on January 22, 2014.

Date of Testing: February 20, 2014 through March 20, 2014

Sample Description: Material for Shower Pans, Wallboard, Curbs, Niches, Benches or Accessories

Model: XPS Foam 3" x 3" square flat samples

See photos

Scope of Testing: The purpose of the testing was to determine whether the sample tested of the XPS foam flat samples met the requirements of section 11.5 of ASTM D4551-12 entitled, "Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Flexible Concealed Water- Containment Membrane".

CONCLUSION: Refer to specific sections of this report.

By our signatures below we certify that all the testing and sample preparation for this report was performed under continuous, direct supervision of IAPMO R&T Lab, unless otherwise stated.

Tested By,

Reviewed by,

Lawrence S. Owens, Test Technician

Dale E. Holloway, Regional Technical Mgr.

Primary Standard: ASTM D4551 – 12. Sections Tested / Evaluated:

11.5 Microorganism Resistance Test

Note: The sections listed above were requested for testing/evaluation. Therefore, only the above sections of the Standard were performed.

Test Results: All tests and evaluations were conducted per the written procedure in the specific standard.

ASTM D4551 – 12

11.5 Microorganism Resistance Test – COMPLIED

Test Procedure:

Samples were tested in accordance with ASTM D4551-12, as per the procedure outlined in Annex A1. Samples were evaluated for visible effects of fungal growth in accordance with ASTM D4551-12 Annex A1, Section A1.3.6.

All materials, equipment, reagents, water, nutrient-salts Agar, and spore suspensions used during the testing of the specimens complied with the applicable sections of ASTM D4551-12. A listing of the fungal cultures used is contained in Table 1 of this report.

Prior to commencement of the testing, samples were prepared in accordance with ASTM D4551-12 Annex 1, Section A1.3.4.1. At the start of the testing, six (6) specimens were inoculated with two (2) varieties of fungi. Three (3) with #6275 and three (3) with #6205, controls were placed in each petri dish along with the specimen.

The specimens were covered and incubated in a Temperature/Humidity chamber that maintained a temperature of $84.5 \pm 1.8^{\circ}\text{F}$ and relative humidity of 90% for a period of 28 days.

Samples were microscopically evaluated at the end of 28 days, in accordance with section A1.3.6. Section A1.3.6 prescribes that should any one of the specimens show evidence of evenly distributed or intense localized growth under 16X magnification of either side of the sample (excluding growth overlapping the edges), the test samples shall be considered to have failed the test.

Test results and observations are reported in Tables 2 and 3 with photographic evidence after 28 days of incubation shown in Figures 1 and 2.

Table 1- Fungal Cultures Used in Composite Spray

| Fungi | ATCC No. |
|--|-----------------|
| Aspergillus Brasiliensis (formally known as Aspergillus niger) | 6275 |
| Chaetomium globosum | 6205 |

Table 2- Aspergillus Brasiliensis (Niger) Results

| Culture: | | Aspergillus Brasiliensis | |
|-------------------|---------------------------|--------------------------|---------------|
| Start Date | | 02/20/2014 | |
| End Date | | 03/20/2014 | |
| Specimen | Specimen Direction | Examination | Result |
| 1 | Top | No Growth | Pass |
| 2 | Top | No Growth | Pass |
| 3 | Top | No Growth | Pass |
| Control | | Growth | |

Table 3- Chaetomium Globosum Results:

| | | | |
|-------------------|---------------------|--------------------|---------------|
| Culture: | Chaetomium Globosum | | |
| Start Date | 02/20/2014 | | |
| End Date | 03/20/2014 | | |
| Specimen | Examination | Examination | Result |
| 1 | Top | No Growth | Pass |
| 2 | Top | No Growth | Pass |
| 3 | Top | No Growth | Pass |
| Control | | Growth | |

Findings: When tested in accordance with Annex A1, there was no evidence of localized fungus growth.

Photograph of the Samples Tested:

