ASTM G-21-09

Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

FINAL REPORT: R2015-912B

Prepared for:

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Accredited Testing Provided by:

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TESTING CERT: #2832.01

Samples Received: December 22, 2015
Testing Initiated: December 23, 2015
Testing Completed: January 20, 2016
Report Issued: June 21, 2017

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Title: Business Manager

Objective:

To evaluate the mold resistance properties of one samples as seen in the ASTM G-21 fungal resistance test.

Test Sample Identification:

1. Fabric backed WC – 1

Test Procedure Summary:

Samples are placed onto the surface of ASTM G-21 nutrient salts agar and sprayed with a mixed spore suspension of five fungal cultures. The nutrient salts agar provides all of the trace nutritional elements needed by fungi to support growth. However, to achieve a heavy growth, the fungi must use the test material as its primary carbon source. Inoculated samples are incubated and then examined for fungal growth.

Test Variables

Test Organisms:	*Aspergillus brasiliensis*[1] ATCC 9642 *Penicillium funiculosum*[2] ATCC 11797 *Chaetomium globosum* ATCC 6205 *Trichoderma virens*[3] ATCC 9645 *Aureobasidium pullulans* ATCC 15233
Sample Description:	2" x 2" fabric backed vinyl pieces
Number of Replicates per Sample:	Three
Positive Growth Control:	Sterile Filter Paper
Media Used:	Nutrient-Salts Agar prepared according to standard
Environmental Conditions:	28 - 30°C; ≥85% relative humidity
Incubation Duration:	28 days
Deviations from Standard Test Method:	None

1 Historically known as *Aspergillus niger*
[2] Historically known as *Penicillium pinophilum*
[3] Historically known as *Gliocladium virens*

Results:

The results for the test pieces can be found in the data table below. The filter paper control pieces had copious fungal growth at Day 14. Temperature and relative humidity were maintained for the duration of the test. These results pertain only to the samples tested.

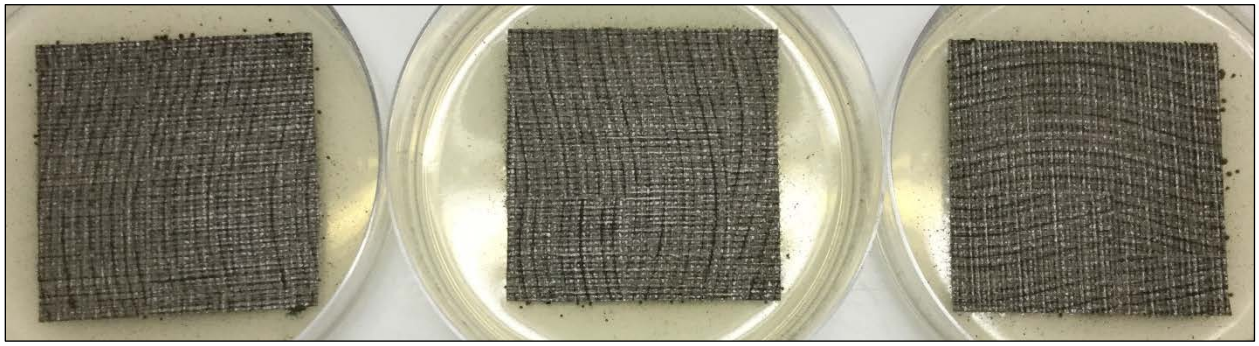
The rating scale for this test is as follows:

Observed Growth	Rating
No Growth	0
Trace of Growth (less than 10% coverage)	1
Light Growth (10-30% coverage)	2
Medium Growth (30-60% coverage)	3
Heavy Growth (60-100% coverage)	4

At week 4, samples rating a "0" or "1" were examined microscopically to confirm the ratings.

Sample Identification	Rep	Week 1	Week 2	Week3	Week 4
		12/30/15	1/6/16	1/13/16	1/20/16
		ASTM G-21 Rating			
Fabric backed WC – 1	1	1	1	1	2
	2	1	1	1	2
	3	1	1	1	2

Fabric backed WC – 1



After 28 days incubation all replicates had light fungal growth.

Fabric backed WC – 2