

# ASTM D 3273 - 16

## Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber

FINAL REPORT: R2017-641

### **Objective:**

To evaluate the mold resistance properties of one sample as demonstrated by the ASTM D3273 fungal resistance test.

### **Test Sample Identification:**

1. Panel 1, 2, 3

### **Test Procedure Summary:**

The ASTM D3273 test chamber contains soil that was seeded with fungal spores and allowed to grow. The test samples were hung in the D3273 chamber with three pieces of the positive growth control to confirm validity of the fungal inoculum coming from the soil. Samples were examined weekly for fungal growth and defacement and rated according to visual defacement of fungal growth.

#### Test Variables

<b>Test Organisms:</b>	<i>Aspergillus niger</i>	ATCC 6275
	<i>Penicillium citrinum</i>	ATCC 9849
	<i>Aureobasidium pullulans</i>	ATCC 9348
<b>Sample Description:</b>	White coating applied to a panel by customer	
<b>Sample Preparation:</b>	Test as received	
<b>Number of Replicates per Sample:</b>	Three	
<b>Positive Growth Control:</b>	Untreated wallboard	
<b>Environmental Conditions:</b>	32.5 ± 1°C; 95 ± 3% relative humidity	
<b>Incubation Duration:</b>	28 days	
<b>Deviations from Standard Test Method:</b>	ASTM D3274 - 09 rating scale used in place of the ASTM D3273 - 16 rating scale	

## Results:

After 4 weeks of incubation in the D3273 chamber, the results for the test pieces can be found in the data table below. These results pertain only to the samples tested.

The control pieces performed as expected, confirming the validity of the test.

Visual growth is determined with an unaided eye, using magnification only to confirm suspicious areas. The pictorial standards were used as guides to establish the amount and type of growth. ASTM D3274 - 09 includes a rating scale with an estimate of the percentage of surface covered and descriptive terms to the general appearance. Odd numbers that are not included in the scale can be applied by interpolation. ASTM D3274 - 09 also gives designation for the different growth patterns.

Rating	Coverage %	Description
10	0	No Fungal Growth
9	0.03	Trace
8	0.1	Slight
6	1	Moderate
4	10	Pronounced
2	33	Severe
0	50	Complete Coverage

Description	Designation
Spot Growth	S
Non-Uniform Spread	P
Complete Coverage	G

Sample Identification	Rep	Week 1 Front	Week 2 Front	Week 3 Front	Week 4 Front
Panel	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10

	Front/Back	Front/Back	Front/Back	Front/Back
MSL-1 ½" Untreated wallboard	3P/3P	0P/0P	0G/0G	0G/0G
MSL-2 ½" Untreated wallboard	4P/3P	0P/0P	0G/0G	0G/0G
MSL-3 ½" Untreated wallboard	3P/3P	0P/0P	0G/0G	0G/0G
Relative Humidity (95 ±3%)	94	95	97	94
Temperature °C (32.5 ± 1°C)	32.2	32.3	32.3	32.3