



**ASTM D3273-00 (2005): Standard Test Method for
the Resistance to Growth of Mold on the Surface
of Interior Coatings in an Environmental Chamber,
Section 7.1 through 7.3 (referenced)**

**Gypsum Fibreboards
(Models: Vidiwall without coating, Vidiwall, Vidiwall HI)**

Project No. G100611994

January 31, 2012

Prepared for:
Knauf Bulgaria EOOD
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SOFIA 1618
BULGARIA

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TEST REPORT
INTERTEK TESTING SERVICES NA, Inc
1717 Arlingate Lane COLUMBUS, OHIO 43228

PROJECT NO.: G100611994

DATE: January 31, 2012

REPORT NO. 100611994COL-001

RENDERED TO:
Knauf Bulgaria EOOD
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SOFIA 1618
BULGARIA

STANDARD REFERENCED AND TEST METHOD:

ASTM D3273-00 (2005): Standard Test Method for the Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, Section 7.1 through 7.3 (referenced).

AUTHORIZATION:

The tests were authorized by Daniella Ivanova; A representative from Knauf Bulgaria EOOD.

GENERAL DESCRIPTION:

The test performed was ASTM D3273-00 (2005): Standard Test Method for the Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, Section 7.1 through 7.3 (referenced) conducted at the Intertek microbiology lab in Columbus. The samples were received on December 12, 2011. The samples are currently in production. The fiber cement samples were tested for their ability to resist contaminants when exposed to *Aspergillus brasiliensis* (formerly known as *Aspergillus niger*) (ATCC # 6275), *Penicillium citrinum* (ATCC # 36382), and *Auerobasidium pullulans* (ATCC # 9438). Each material was exposed to the mold in triplicate.

TEST DESCRIPTION

Samples:

1. For visual evaluation three samples of each material were inoculated
2. Mold samples were prepared on slants using 25% nonionic surfactant. Mold spore were broken up and put into solution. This solution was then poured over the soil and allowed to grow for 2 weeks.
3. Viability controls were taken to verify mold growth

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4. Samples were brought to condition at 23°C +/- 2°C with 50% +/- 5% relative humidity for four days prior to testing.
5. Samples were hung above the soil mixture containing the mold spores. Samples were allowed to hang for 4 weeks. Positive, negative, environmental, and viability controls were put in place at this time.
6. Specimens were periodically checked for growth during the incubation period; tests may be terminated early for any specimen showing a visual rating range of 2 units from any other test sample or greater prior to the end of the 4 weeks
7. After 4 weeks a growth rating scale of 0-10 based on ASTM D3274 (2009) is taken with 0 being complete coverage and 10 being no mold growth
8. If any growth is detected, pictures are taken of the growth and placed into a comprehensive report
9. The visual acceptance criterion is no growth rating between test samples should differ more than 2 rating units.

CALIBRATED EQUIPMENT:

Equipment Type	Equipment No.	Cal. Due Date
Micropipette	CE 1173	11/15/12
Environmental Chamber	CE 1159	For Reference Only
Digital Hygrometer (Chamber)	CE 1160	11/04/12
pH meter	CE 1148	Verify before use
Autoclave	CE 1126	03/15/12
Microscope	CE 1154	For Reference Only
Calipers	E 112	09/19/12
Digital Hygrometer (Ambient)	E 226	03/25/12
Balance	CE 1143	03/14/12
Centrifuge	CE 1133	For Reference Only
Atomizer/Nebulizer	N/A	For Reference Only
Stopwatch	E 398	07/12/12
Ruler	N/A	For Reference Only

RESULTS:

The negative control showed no signs of growth.

The positive controls showed complete growth over the agar surface. The original number of mold aerosolized onto the surface was 1.0×10^8 cfu/ml.

The viability controls showed medium to heavy growth over the agar surface.

The environmental controls showed a growth rating of 6 at completion of testing.

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Test incubation began on January 03, 2012 at 4:30 PM and ended at January 31, 2012 at 1:00 PM

Please see following table for rating the material achieved for each microorganism.

Sample Identification	<i>A. pullulans</i> (rating)	<i>A. niger</i> (rating)	<i>P. citrinum</i> (rating)
Vidiwall without coating	9	9	9
Vidiwall without coating	9	9	9
Vidiwall without coating	9	9	9
Vidiwall	9	9	9
Vidiwall	9	9	9
Vidiwall	9	9	9
Vidiwall HI	9	9	9
Vidiwall HI	9	9	9
Vidiwall HI	9	9	9

Test Samples:

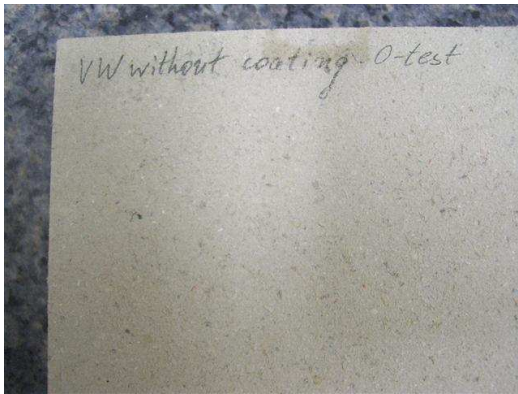


Figure 1. Vidiwall without coating

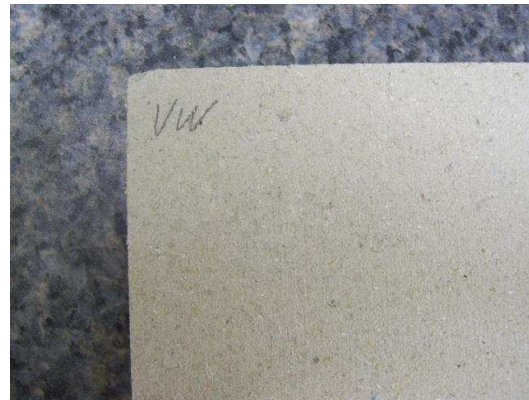


Figure 2. Vidiwall

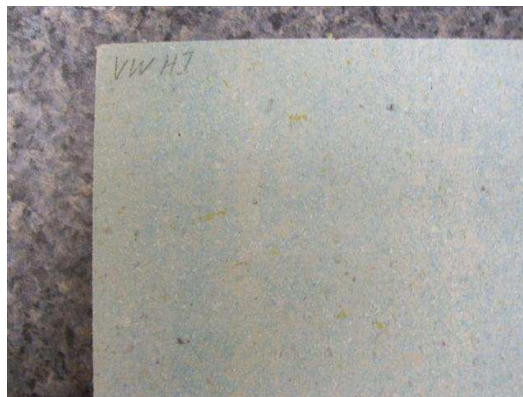


Figure 3. Vidiwall HI

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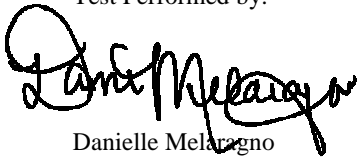
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CONCLUSION:

This report documents the performance of the gypsum fibreboard's (Models: Vidiwall without coating, Vidiwall, and Vidiwall HI) ability to resist mold contaminants. The microbiological test sample evaluations were conducted at the Intertek laboratory located in Columbus, OH between December 30, 2011 and January 31, 2012 utilizing the test method and acceptance criteria of ASTM D3273-00 (2005): Standard Test Method for the Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, Section 7.1 through 7.3 (referenced). The gypsum fibreboard's (Models: Vidiwall without coating, Vidiwall, and Vidiwall HI) does meet the requirements and acceptance criteria of ASTM D3273-00 (2005): Standard Test Method for the Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, Section 7.1 through 7.3 (referenced) such that all results differed by less than 2 rating units with a mean rating unit/range score of 9.

Test Performed by:



Danielle Melaragno
Microbiologist Tech I
Columbus Office

Report Approved by:



Shannon Meier
Microbiologist/Project Engineer
Columbus Office

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