

# REPORT INTERTEK ETL-SEMKO DIVISION 1717 Arlingate Lane COLUMBUS, OHIO 43228

PROJECT NO.: 3139249

DATE: March 10, 2008

### REPORT NO. 3139249COL-001

RENDERED TO: GigaCrete Inc 6775 Speedway Blvd #M105 Las Vegas, NV 89115

# STANDARD REFERENCED AND TEST METHOD:

ASTM G21-96 (2002): Resistance to Synthetic Polymeric Materials to Fungi, Section 6.4.1 through 6.4.7 and 9.3 (referenced).

## **AUTHORIZATION:**

The test was authorized by Erik Hanson; A representative from GigaCrete Inc.

### SPECIMEN DESCRIPTION:

The test performed was on ASTM G21-96 (2002): Resistance to Synthetic Polymeric Materials to Fungi conducted at the Intertek microbiology lab in Columbus. The sample was received on February 6, 2008. The sample is currently in production. The PlasterMax was tested for its ability to resist contaminants when exposed to Aspergillus niger (ATCC # 9642), Penicillium pinophilum (ATCC # 11797), Chaetomium globosum (ATCC # 6205), Gliocadium virens (ATCC # 9645) and Aureobasidium pullulans (ATCC # 15233). Three samples of the material were tested for each of the fungi.

### TEST DESCRIPTION

### Samples:

- 1. For visual evaluation three specimens were inoculated, unless otherwise specified by client
- Sufficient amount of nutrient-salts agar was poured into sterile containers based on size of specimens. Once agar was solidified, specimens were placed on agar
- 3. The surface of the agar/specimen was inoculated with the spore suspension by spraying suspension over the specimens so that the entire surface is moistened with spore suspension
- 4. The test specimens were covered and incubated at 20 to 30°C with a relative humidity of 85%, for 28 days.
- 5. Specimens were periodically checked for growth during the incubation period; tests may be terminated early for any specimen showing a visual rating of 2 or greater prior to the 28 days

This report is for the exclusive use of INTERTEK's Client and is provided pursuant to the agreement between INTERTEK and its Client. INTERTEK's responsibility and liability are limited to the terms and conditions of the agreement. INTERTEK assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report and then only in its entirety. Any use of the INTERTEK name, one of its marks, the test report or any quotes or excerpts from the report for sale or advertisement of the tested material, product or service must first be approved in writing by INTERTEK. The observations and test results in this report by itself does not imply that the material, product or service is or has ever been under an INTERTEK certification program. Intertek does not endorse or recommend the products evaluated in this report.

REPORT NO.: 3139249COL-001 DATE: March 10, 2008

6. After 28 days a growth rating scale of 0-4 based on ASTM G-21-96 is taken. See table below.

- 7. If any growth is detected, pictures are taken of the growth and placed into a comprehensive report
- 8. The acceptance criteria is no growth rating higher than trace growth or a rating of 1

Observed Growth on Specimens (Sporulating or Non-sporulating or Both)	Rating	Comments
None	0	Devoid of microbial growth. Surface exhibiting no chemical, physical or structural change. Note 1
Traces of Growth (less than 10%)	1	Scattered, sparse or very restricted microbial growth. Appearance on surface minor or inhibited. Surface exhibiting no chemical, physical or structural change.  Note 1
Light Growth (10 to 30%)	2	Intermittent infestation. Loosely spread microbial colonies on surface/moderate growth. Includes continuous filamentous (cobwebby) growth extending over the entire surface. Surface exhibiting no chemical, physical or structural change
Medium Growth (30 to 60%)	3	Substantial amount of microbial growth. Surface exhibiting chemical, physical and structural change
Heavy Growth (60% to complete coverage)	4	Massive microbial growth. Surface decomposed or rapidly deteriorating
Notes	1	A rating of 0 or 1 needs to be confirmed using a microscope since non-sporulating growth may not be seen without the aid of a microscope. The report should indicate the magnification power of the microscope

All samples receiving a growth rating of 2 or higher are automatic failures.

# **CALIBRATED EQUIPMENT:**

CE 1141- Micropipette (Fisherbrand)

CE1142-Environmental Chamber (Thermotron) Model SM 3.5S

REPORT NO.: 3139249COL-001

DATE: March 10, 2008

### RESULTS:

The negative control showed no signs of growth.

The positive control showed complete growth over the agar surface. The original number of fungus aerosolized onto the surface was  $1.0 \times 10^8$  cfu/ml.

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

Material	A. niger	A. pullulans	P. pinophilum	G. virens	C. globosum
Plastermax	0	1	0	0	1

### **CONCLUSION:**

This report documents the performance of the PlasterMax's ability to resist fungal contaminants. The microbiological test sample evaluations were conducted at the Intertek laboratory located in Columbus, OH between February 8, 2008 and March 10, 2008 utilizing the test method and acceptance criteria of ASTM G21-96 (2002): Resistance to Synthetic Polymeric Materials to Fungi, Section 6.4.1 through 6.4.7 and 9.3. The PlasterMax does meet the acceptance criteria and does demonstrate the resistance of fungal contamination.

Test Performed by:

Miller Miller

-a A

Report Approved by:

Shannon Meier Microbiologist Columbus Office Phil Mason Lead Sanitation Engineer Atlanta Office