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	Request dared 02-04-04	YR/bt/04/258	Chaineux, 25 June 2004

Analysis Report N°. 0116

Required test(s) :

ASTM C1338

Description of the sample(s) :

Identification number	Information given by the customer	Date of receipt
V400143	Smooth brilliant PVC panel	05-04-2004
V400144	Smooth matt PVC panel	05-04-2004
V400229	Birch Tongue depressors	18-05-2004

Yvette Rogister
Order responsible

For further information please contact our sector adviser: Marc Gochel.

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The results of the analysis cover the received samples. Centexbel is not responsible for the representativeness of the samples.

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Reference : V400143 - Smooth brilliant PVC panel
V400144 - Smooth matt PVC panel
V400229 - Birch Tongue depressors (reference material)

Determination of fungi resistance of insulation materials and facings

Date of ending the test : 21-06-2004

1. Method

ASTM C 1338 – 00 : Standard test method for determining fungi resistance of insulation materials and facings
This method is used for the determination of the « resistance » of insulation materials against the growth of fungi under favourable conditions (temperature and humidity) for their development.
A reference material is generally used in this method to perform a comparative evaluation of the resistance of the test sample.

Description of the method :
A suspension containing a mix of fungi is sprayed on the surface of the samples, previously cut into small tapes. These contaminated samples are then placed in different containers and incubated in a chamber at 30°C +/- 2°C and a relative humidity of 95% +/- 4%. The incubation time is a period of minimum 28 days.
Together with the samples small tapes of the reference material are also contaminated. After 7 days of incubation, the growth on the surface of these samples has to be evaluated.

Validation of the test : The test is valid when a visible growth is noticeable on the reference sample after 7 days of incubation.

2. Results

Test Conditions :

- Number : 3 replicates / sample
- Size of the samples : cut into tapes of : 2 cm by 15 cm
- Mix of fungi consisted of: *Aspergillus niger ATCC 6275*
  Aspergillus versicolor ATCC 11730
  Penicillium funiculosum ATCC 11797
  Chaetomium globosum ATCC 6205
  Aspergillus flavus ATCC 9643
- Concentration of the spores suspension (of the mix) : +/- 10^6 spores/ml
- Contamination : 0.5 ml of the above mix is sprayed on the surface of the sample to be tested.

Performed in the microbiological lab under the responsibility of Yvette Rogister.

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- Temperature : 30 °C +/- 2° C
- Humidity relative : 98 % +/- 2 %
- Duration of the incubation : 28 days

Visual evaluation:

In table 1 the results of the observation of growth on the surface of the samples after 28 days of incubation in comparison to the reference sample are noted.

Table 1 : Growth observed on the surface of the samples.

Sample N°	***Growth***	***Validation***
Reference sample = V400229	Visible growth on all of the surface (after 7 days) – Covered with spores and mycelium	OK
V400143	No growth	valid
V400144	No growth	valid

Interpretation of the results

The growth observed on the samples has to be compared with the growth observed on the surface of the reference sample.
If the growth on the sample is more important, the result for this sample has to be noted as "FAIL".
If the growth on the sample is less important, the result for this sample has to be noted as "PASS".

Conclusion :

Sample N°	***Result***
V400143	**PASS**
V400144	**PASS**

The photos given in the next page illustrate the samples after incubation.

Remark : Due to the hydrophobic surface of the samples, in some places droplets of inoculum have merged together and formed more important drops which appear on the photos. It's not a degradation of the sample.

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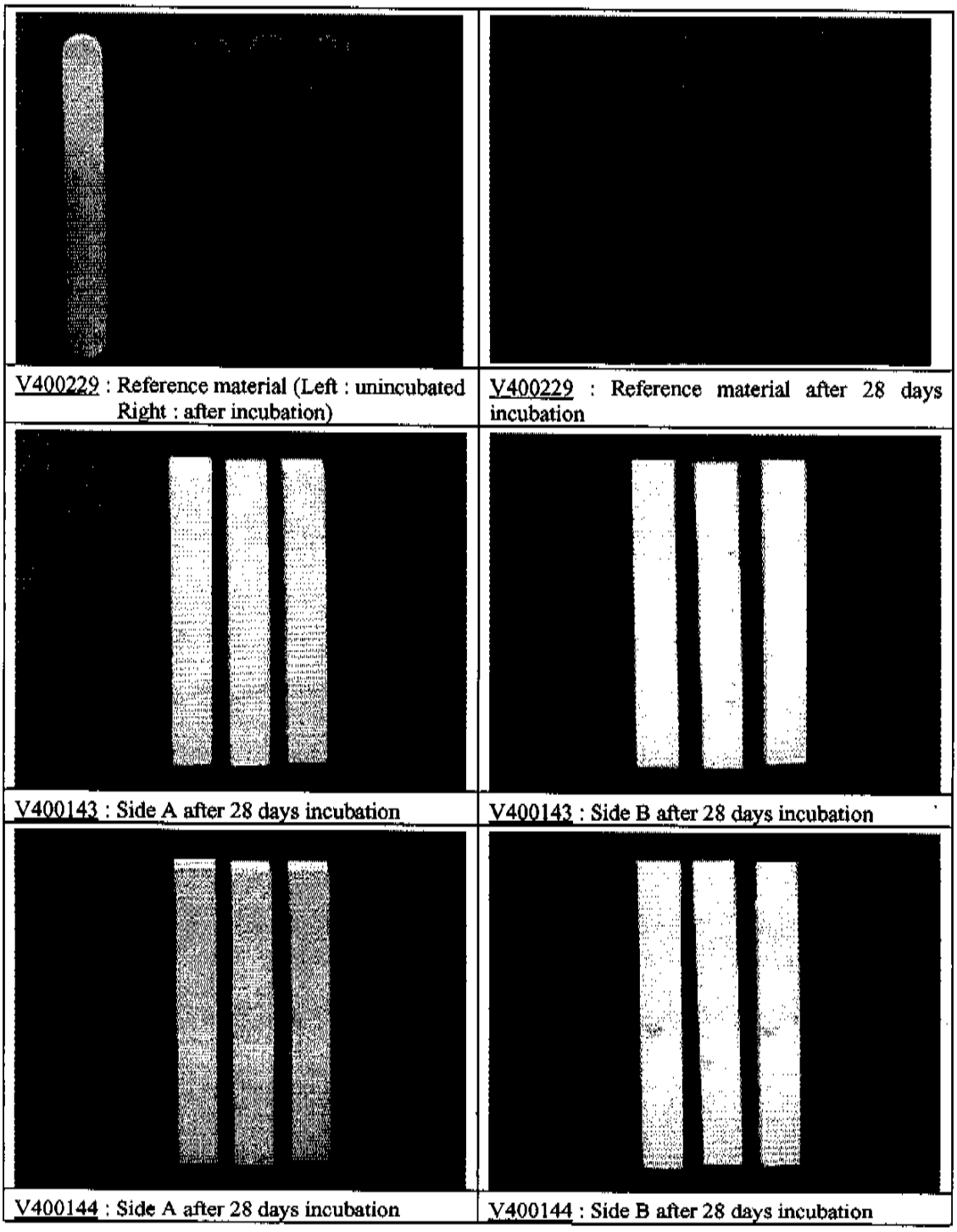

V400229 : Reference material (Left : unincubated Right : after incubation)

V400229 : Reference material after 28 days incubation

V400143 : Side A after 28 days incubation

V400143 : Side B after 28 days incubation

V400144 : Side A after 28 days incubation

V400144 : Side B after 28 days incubation

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