

Fungal Resistance Testing to EN 15457

For

Vivechrom SA

Final Report

Work Carried Out By

T. Glazier

J. Gadd

Group Leader

Angie Miller

PRA Ref: 77352a

10 October 2014

Global Surface Coatings Covered

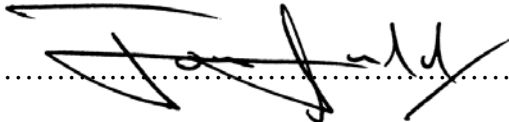


Final Report


PRA Ref. Number 77352a
Date Received 20 March 2014
Date Issued 10 October 2014
Client Vivechrom SA
Patima Magoylas
Mandra Attikis 19600
Greece
FAO: Iosif Tsagarogiannis

Work Requested Fungal Resistance Testing to EN 15457

Samples Submitted Vivecryl Thermoelastic Eco Paints

Work Carried out by


T. Glazier, J. Gadd

Approved by


A. Miller, T. Glazier

Authorised Signatory

Note – Opinions or interpretations expressed herein are outside the scope of UKAS accreditation. Only tests marked with an asterisk are UKAS accredited. A copy of the PRA accreditation schedule can be found on the UKAS website under laboratory reference 0069.

PRA
Coatings Technology Centre
14 Castle Mews, High Street, Hampton
Middlesex TW12 2NP, United Kingdom

www.pra-world.com
coatings@pra-world.com
T: +44 (0)20 8487 0800
F: +44 (0)20 8487 0801



I Materials Submitted For Testing

Vivecryn Thermoelastic Eco Paint

White

Base P

Base D

2 Test Procedure

The samples were submitted to an associated laboratory for testing. Anti-fungal activity was assessed employing EN 15457:2006 - Paints and Varnishes – Laboratory method for testing the efficacy of film preservatives in a coating against fungi. The coatings were applied to cellulose fibre filters (6 x Whatman #1, 55 mm diameter) and left to dry in the dark at 20°C for 1 week.

Three replicate coated filters of each test system were placed onto inoculated (1000 µl per sample) Malt Extract Agar plates (MEA) and the film surfaces further inoculated with an aliquot (0.2 ml) of the suspension of mixed spores of the test species (10⁶ - 10⁷ cells ml⁻¹ of each species - see Table 1 for details). The samples were then incubated at 24°C for up to 21 days. After 7 and 14 days, the surface of each sample was rated and after 21 days the samples were rated and imaged photographically.

Species	Reference Number
<i>Aureobasidium pullulans</i>	DSM 2404
<i>Cladosporium cladosporoides</i>	DSM 62121
<i>Aspergillus versicolor</i>	DSM 1943
<i>Penicillium purpurogenum</i>	DSM 62866

Table 1: Fungal Inoculum

3 Results and Observations

The results of the EN 15457 method are shown in Table 2 and Plates below.

Coating	Days of Incubation		
	7	14	21
Control Filter Paper	4	4	4
Vivecryn Thermoelastic Eco White	0*	0*	0*
Vivecryn Thermoelastic Eco Base P	0*	0*	0*
Vivecryn Thermoelastic Eco Base D	0*	0*	0

Table 2: Maximum Growth Ratings Observed After Incubation (Average of 3 Replicates)

KEY

0 = No mycelium on the surface of the specimen

1 = Up to 10% growth on the surface of the specimen

2 = More than 10% up to 30% growth on the surface of the specimen

3 = More than 30% up to 50% growth on the surface of the specimen

4 = More than 50% up to 100% growth on the surface of the specimen

* = Denotes a zone of inhibition surrounding the filter paper

It can be seen from the results in Table 2 above that the combined fungal inoculum was able to colonise the blank filter paper surface by greater than 50% after 7 days.. No growth of the mixed fungal inoculum was observed on the surfaces of any of the samples after 21 days with zones of inhibition around the coated filter paper of the samples Vivecryn Thermoelastic White and Vivecryn Thermoelastic Base P.

4 Appearance of the Samples After 21 days

Plate 1 Plate 1 Untreated (Control)



Plate 2 Vivecyl Thermoelastic Eco White



Plate 3 Vivecyl Thermoelastic Eco Base P



Plate 4 Vivecryl Thermoelastic Eco Base D



5 Conclusions

The Vivecryl Thermoelastic Eco range meets the requirements of EU Ecolabel for indoor and outdoor paints -C(2014) 3429 with respect to fungal resistance

End of Report

TJG.



www.pra-world.com/technical

PRA Coatings Technology Centre, 14 Castle Mews, High Street, Hampton, Middlesex, TW12 2NP, UK
T: +44 (0)20 8487 0800 F: +44 (0)20 8487 0801 E: coatings@pra-world.com