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REPORT

Reaction to fire testing of ES/VFR/W with Premier white top coat applied to plywood, thickness 9 mm Ignitability test according to EN ISO 11925-2:2010

Report no.	2019-Efectis-R001233
Sponsor	Intumescent Systems Ltd Envirograf House Barfrestone CT15 7JG DOVER UNITED KINGDOM
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1. PRODUCT IDENTIFICATION

ES/VFR/W with Premier white top coat applied to plywood, thickness 9 mm, further referred to as 'the product'.

2. ABSTRACT

Determination of the **ignitability** properties of the product, by **direct small flame impingement** according to EN ISO 11925-2:2010/C1:2011, with the objective to obtain the reaction to fire classification according to EN 13501-1:2018.
This test series is an additional series in the CE-marking process initiated by the certification company The Catalonia Institute of Construction Technology (ITeC) in Barcelona.
The purpose is a verification of the results of the same coating system with 5 coating layers instead of 3 layers as described in report 2018-Efectis-R002112.

3. DETAILS OF THE PRODUCT TESTED

3.1 INTENDED APPLICATION

The product will be used as a ceiling- wall- and façade finish.

3.2 MANUFACTURER

Intumescent Systems Ltd
Envirograf House
Barfrestone
CT15 7JG DOVER
UNITED KINGDOM

3.3 PRODUCT DESCRIPTION

According to the sponsor the product is composed of:

- Coat 1 – layer of ES/VFR clear primer 12m^2;
- Coat 2 – layer of ES/VFR/W 10m^2;
- Coat 3 – layer of ES/VFR/W 10m^2;
- Coat 4 – layer of premier white top coat 8m^2;
- Coat 5 – layer of premier white top coat 8m^2.

Applied to plywood thickness 9 mm.

The product has a total thickness of 9 mm and a mass per unit area of approx. 4.4 kg/m^2.

4. DETAILS OF THE EXAMINATION

4.1 SAMPLES

Sampling procedure	The specimens were prepared and submitted by the sponsor. The preparation is described in report 2019-Efectis-R001227.
Age	At the time of receipt: no information received.
Date of receipt	June 12, 2019

4.2 SPECIMEN PREPARATION

Substrate used	Plywood, not fire retardant treated (EN 636), 450±50 kg/m^3, thickness 9±1mm (class D-s2,d0) according to EN 13238:2010.
Method of applying	Painting

4.3 CONDITIONING

Prior to the examinations, the specimens were conditioned over a period of 2 weeks minimum at a temperature of (23 ± 2) ºC and a relative humidity of (50 ± 5) % according to § 4.1 of EN 13238:2010.

4.4 EXAMINATION

Number of tests	Due to the verification purpose of this test series only four single ignitability tests were carried out according to EN ISO 11925-2.
Deviations from the test method	None
Guideline for European Technical Approval of Fire retardant products	ETAG 028:2012
Date of examination	June 27, 2019

The verification results are given in Table 1, Appendix: Results.

5. CONCLUSIONS

A formal classification is to be assessed in accordance with EN 13501-1, “Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests”.
This classification will be a combination of the previous test results described in test report 2018-Efectis-R002112 and the results of this verification series. The verification of the test results is described in report 2019-Efectis-R001219.

Remarks:
The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

Regarding the precision of the test method, following Annex B of EN ISO 11925-2, the absolute repeatability/reproducibility for this test method is estimated to lie within 3 s to 5 s for all times measured.

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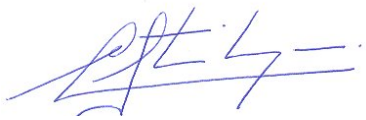
Junior Project leader reaction to fire



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APPENDIX: VERIFICATION RESULTS

Table 1: Ignitability classification parameter results

Flame application time: 30 s					
Sample	Ignition of sample	Maximum flame Height	t_{150}	Afterburning time	Ignition of filter paper
	{Y=Yes/N=No}	[mm]	[s]	[s]	{Y=Yes/N=No}
Surface ignition					
1	Y	30	not reached	0	N
2	Y	45		0	N
Maximum		45			
Classification parameters		**150 mm reached within 60 s**			**N**
		Ignition of filter paper			**N**
Edge ignition					
1	Y	10	not reached	0	N
2	Y	15		0	N
Maximum		45			
Classification parameters		**150 mm reached within 60 s**			**N**
		Ignition of filter paper			**N**

Observations of physical behaviour of the test specimen: None