

Reaction to fire testing of coated Cross Laminated Timber (CLT) Ignitability test according to EN ISO 11925-2:2010 + C1:2011

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1. PRODUCT IDENTIFICATION

Coated Cross Laminated Timber (CLT), 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.

3. DETAILS OF THE PRODUCT TESTED

3.1 INTENDED APPLICATION

The product will be used as a wall covering.

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 from inside out composed of:

- Cross Laminated Timber coated with:
 - One coat of HWAP primer at 12 m² per litre;
 - Two coats of HW02/N Clear Intumescent coating at 8 m² per litre per coat;
 - One coat of Enviro Clear top coat in satin at 8 m² per litre.

The product has a total thickness of 45 mm and a density of approx. 500 kg/m³.

4. DETAILS OF THE EXAMINATION

4.1 SAMPLES

Sampling procedure	The specimens were prepared and submitted by the sponsor.
Age	At the time of receipt: no information received.
Date of receipt	March 20,2020

4.2 SPECIMEN PREPARATION

Substrate used	Cross Laminated Timber (CLT)
Method of fixing	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) °C and a relative humidity of (50 ± 5) % according to § 4.1 of EN 13238.

4.4 EXAMINATION

Number of tests	A total of twelve single ignitability tests were carried out according to EN ISO 11925-2.
Deviations from the test method	None
Harmonised Product Standard	At the time of examination of the product, the sponsor was not aware of a related existing Harmonised Product Standard.
Date of examination	April 7, 2020
Location of examination	Efectis Nederland BV, Bleiswijk, The Netherlands

The 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".

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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APPENDIX: 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	50	not reached	0	N
2	Y	40		0	N
3	Y	40		0	N
4	Y	40		0	N
5	Y	40		0	N
6	Y	45		0	N
Maximum		50			
Classification parameters		150 mm reached within 60 s			N
		Ignition of filter paper			N
Edge ignition					
1	Y	45	not reached	0	N
2	Y	45		0	N
3	Y	50		0	N
4	Y	45		0	N
5	Y	50		0	N
6	Y	45		0	N
Maximum		50			
Classification parameters		150 mm reached within 60 s			N
		Ignition of filter paper			N

Observations of physical behaviour of the test specimen: None