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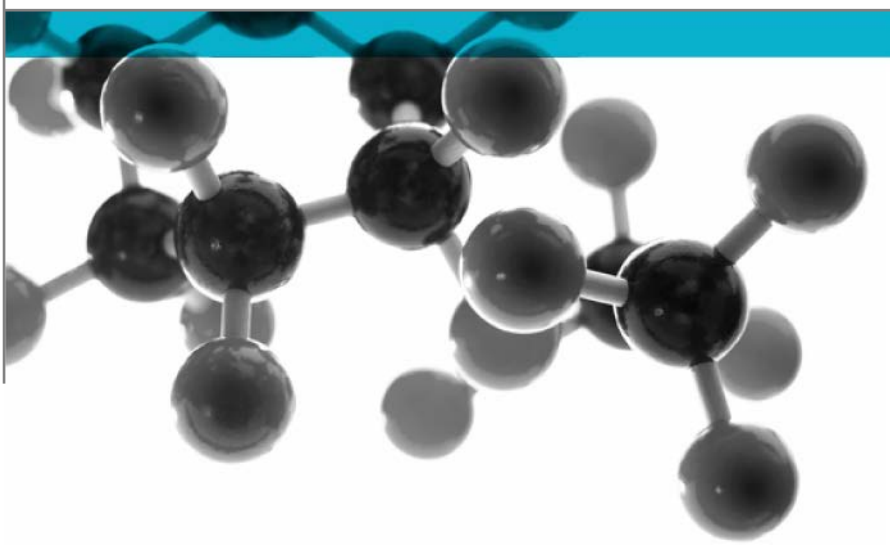
BS EN ISO 11925-2: 2010



Ignitability Of Building Products Subjected To Direct Impingement Of Flame

Part 2: Single Flame Source Test

A Report To: Ecodek

Document Reference: 389640

Date: 20th November 2017

Issue No.: 1

Testing
Advising
Assuring

UKAS TESTING
0249

Executive Summary

Objective To determine the performance of the following product when tested in accordance with BS EN ISO 11925-2:2010.

Generic Description	Product reference	Thickness	Density
Wood and high density polyethylene (HDPE) composite	"Ecodek"	21mm	1.11±0.05g/cm³
Please see page 6 of this test report for the full description of the product tested			

Test Sponsor Ecodek, Unit 13, Abenbury Way, Wrexham Industrial Estate, Wrexham, LL13 9UZ

Test Results:

On the set of six specimens which were subject to surface application, the maximum flame height reached was observed to be 0mm ± 1.7mm.

On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be 40mm ± 0.8mm

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Date of Test 18th October 2017

Signatories

Responsible Officer
C Jacques*
Technical Officer

Approved
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Senior Technical Officer

Authorised
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Business Unit Head

* For and on behalf of **Exova Warringtonfire**.

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Test Details

Purpose of test

To determine the performance of specimens of a product when they are subjected to the conditions of the test specified in BS EN ISO 11925-2:2010 "Reaction to Fire tests - Ignitability Of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test".

The test was performed in accordance with the procedure specified in BS EN ISO 11925-2:2010 Reaction to Fire Tests - Ignitability of Building Products subjected to direct impingement of flame – Part 2: Single Flame Source Test, and this report should be read in conjunction with that BS EN ISO Standard.

Scope of test

BS EN ISO 11925-2 specifies a method of test for determining the ignitability of building products by direct small flame impingement under zero impressed irradiance using specimens tested in a vertical orientation.

Fire test study group/EGOLF

Certain aspects of some fire test specifications are open to different interpretations. The Fire Test Study Group and EGOLF have identified a number of such areas and has agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed.

Instruction to test

The test was conducted on the 18th October 2017 at the request of Ecodek, the sponsor of the test.

Provision of test specimens

The specimens were supplied by the sponsor of the test. **Exova Warringtonfire** was not involved in any selection or sampling procedure.

Conditioning of specimens

The specimens were received on the 22nd September 2017.

Prior to test the specimens were stored for 25 days in a standard atmosphere as defined in BS EN 13238:2010 Conditioning Procedures and General Rules for selection of substrates until constant mass was achieved.

Intended application

Floor decking.

Substrate

The specimens were tested loose laid over a nominally 8mm thick fibre cement board substrate (as specified in EN 13238: 2010) present.

Flame application time

The flame was applied for 15 seconds

Description of Test Specimens

The description of the system given below has been prepared from information provided by the sponsor of the test. This information has not been independently verified by **Exova Warringtonfire.**

All values quoted are nominal, unless tolerances are given.

General description	Wood and high density polyethylene (HDPE) composite
Product reference	"Ecodek"
Name of manufacturer	Vannplastic
Thickness	21mm (stated by sponsor) 20.34mm (determined by **Exova Warringtonfire**)
Density	1.11±0.5g/cm³ (stated by sponsor) 1.04g/cm³ (determined by **Exova Warringtonfire**)
Colour reference	"Grey" (determined by **Exova Warringtonfire**)
Flame retardant details	**See Note 1 Below**
Brief description of manufacturing process	Extrusion

Note 1: The sponsor of the test confirmed that no flame retardants were used in the production of this product.

Test Results

Number of specimens tested

Six specimens were tested, each of which were subjected to surface exposure to flame with the decorative face exposed.

Six specimens were tested, each of which were subjected to edge exposure to flame with the decorative face exposed.

Applicability of test results

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.

The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product which is supplied or used is fully represented by the specimens which were tested.

The test results for the individual specimens, together with observations made during the test and comments on any difficulties encountered during the test are given in Tables 1 and 2.

On the set of six specimens which were subject to surface application, the maximum flame height reached was observed to be 0mm ± 1.7mm.

On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be 40mm ± 0.8mm

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Validity

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over five years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

Table 1

Test Flame Application Position - Surface Of Decorative Face

Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (± 1.7 mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	No	Did not reach	0	None	None	45	15
2	No	Did not reach	0	None	None	50	15
3	No	Did not reach	0	None	None	50	20
4	No	Did not reach	0	None	None	43	20
5	No	Did not reach	0	None	None	50	20
6	No	Did not reach	0	None	None	45	20

Table 2

Test Flame Application Position - Edge Of Decorative Face

Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (± 0.8 mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	Yes	Did not reach	40	None	None	15	23
2	Yes	Did not reach	40	None	None	20	20
3	Yes	Did not reach	30	None	None	18	25
4	Yes	Did not reach	30	None	None	35	15
5	Yes	Did not reach	30	None	None	40	22
6	Yes	Did not reach	30	None	None	35	18

Revision History

Issue No :	Re-issue Date :
Revised By:	Approved By:
Reason for Revision:	

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