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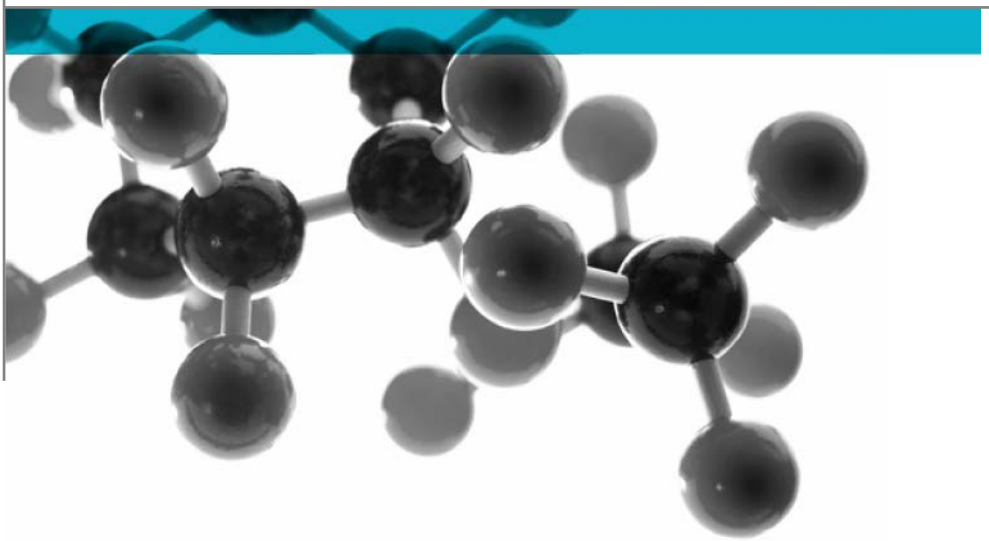
BS EN ISO 11925-2: 2010



Ignitability Of Building Products Subjected To Direct Impingement Of Flame
Part 2: Single Flame Source Test

A Report To: Kernow Coatings Ltd.

Document Reference: 411218

Date: 18th April 2019

Issue No.: 1

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	Weight per unit area
Textured floor graphic polyester film adhered to a fibre cement board substrate	"170TFG" (self adhesive film)	315 ±6 micron	385 ± 8g/m²
Individual components used to manufacture composite:			
Film	Unable to provide	170micron	224g/m²
Adhesive	Unable to provide	Unable to provide	Unable to provide
Please see page 6 of this test report for the full description of the product tested			

Test Sponsor Kernow Coatings Ltd., Penryn, Cornwall, TR10 9DQ

Test Results:

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

On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be 20 ± 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 9th April 2019

Signatories

Responsible Officer C. Jacques * Senior Technical Officer	Authorised T. Mort * Senior Technical Officer

* For and on behalf of 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 9th April 2019 at the request of Kernow Coatings Ltd., the sponsor of the test.

Provision of test specimens

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

Conditioning of specimens

The specimens were received on the 28th February 2019.

Prior to test the specimens were stored for 39 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 covering

Substrate

The specimens were tested with no additional substrate 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 Warringtonfire**.** All values quoted are nominal, unless tolerances are given.

General description		Textured floor graphic polyester film adhered to a fibre cement board substrate
Product reference		"170TFG"
Name of manufacturer		Kernow Coatings Ltd
Thickness of overall composite		315 ± 6micron (stated by sponsor) 0.33mm (determined by Warringtonfire)
Weight per unit area of overall composite		385 ± 8g/m² (stated by sponsor) 376.72g/m² (determined by Warringtonfire)
Film	Product reference	**See Note 1 Below**
	Generic type	Polyethylene terephthalate film with proprietary textured ink jet receptive coating
	Name of manufacturer	Kernow Coatings Ltd
	Thickness	170micron
	Weight per unit area	224g/m²
	Flame retardant details	**See Note 1 Below**
Adhesive	Product reference	**See Note 1 Below**
	Generic type	Removable Adhesive
	Name of manufacturer	Kernow Coatings Ltd
	Application rate	**See Note 1 Below**
	Application method	**See Note 1 Below**
	Flame retardant details	**See Note 1 Below**
Substrate	Product reference	"NT D4 604"
	Generic type	Fibre cement board
	Name of manufacturer	Scheerders van de Kerkhove (SVK)
	Thickness	6mm
	Density	1800kg/m³
Brief description of manufacturing process		**See Note 1 Below**

Note 1: The sponsor was unable to provide this information.

The description of the specimens given above is therefore not as complete as would normally be the case for descriptions included in Warringtonfire test reports and the description may not fully comply with the requirements of the test standard. In all other respects however the tests were conducted fully in accordance with the requirements of the test standard and the test results are valid.

Test Results

Number of specimens tested

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

Six specimens were tested, each of which were subjected to edge exposure to flame with the printed 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 0 ± 1.7mm.

On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be 20 ± 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. Where this report is used to confirm compliance for use on European rolling stock as per the Technical Specification for Interoperability (LOC&PAS TSI (Commission Regulation (EU) No. 1302/2014)), all tests must have been conducted within the last 5 years or the test reports must have been reviewed within the last five years. 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 Printed 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	None	None	None	25	9
2	No	Did Not Reach	None	None	None	35	10
3	No	Did Not Reach	None	None	None	28	9
4	No	Did Not Reach	None	None	None	26	10
5	No	Did Not Reach	None	None	None	30	10
6	No	Did Not Reach	None	None	None	28	9

Table 2

Test Flame Application Position - Edge Of Printed 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	20	None	None	20	15
2	Yes	Did Not Reach	20	None	None	20	15
3	Yes	Did Not Reach	20	None	None	21	13
4	Yes	Did Not Reach	20	None	None	17	15
5	Yes	Did Not Reach	20	None	None	19	13
6	Yes	Did Not Reach	20	None	None	18	14

Revision History

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

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