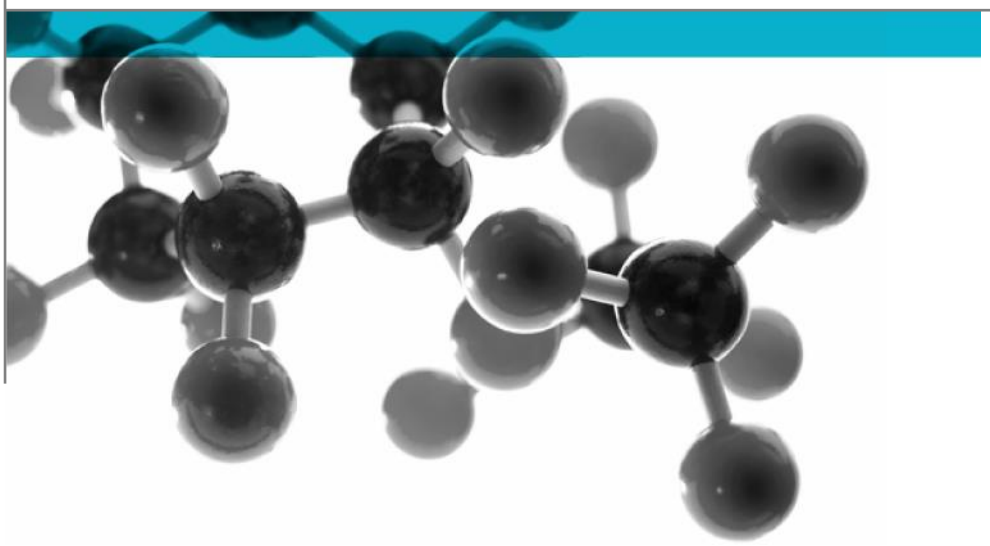
Exova Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom

T : +44 (0 1925 655116
F : +44 (0) 1925 655419
E : warrington@exova.com
W: www.exova.com

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: GMS Insulations Ltd.

Document Reference: 347751

Date: 13th January 2015

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.

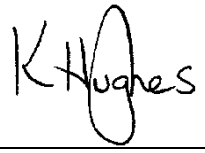
Generic Description	Product reference	Thickness	Density
Coated spray foam insulation	"Icynene Classic Plus/DC 315"	54.39mm *	2.16kg/m^2 *
Individual components used to manufacture composite:			
Water based fireproof paint	"DC 315"	20 mils (0.51mm)	20 kg/m^3
Spray foam insulation	"Icynene Classic Plus"	50mm	12kg/m^3
* determined by **Exova Warringtonfire**			
Please see page 5 of this test report for the full description of the product tested			

Test Sponsor GMS Insulations Ltd., Legga, Moyne, Co Longford 119, Ireland.

Test Results: **On each set of six specimens which were tested, the flame tip did not reach a distance of 150mm before the end of the test.**

Date of Test 18th December 2014

Signatories



Responsible Officer
K. Hughes *
Technical Officer

Authorised
S. Deeming*
Operations Manager

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

Report Issued: 13th January 2015

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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 have 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 December 2014 at the request of GMS Insulations Ltd., 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 15th December 2014.

Prior to test the specimens were stored for 3 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

Thermal insulation.

Substrate

The specimens were tested without a substrate present.

Flame application time

The flame was applied for 30 seconds.

Description of Test Specimens

The description of the specimens given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

General description		Coated spray foam insulation
Product reference of composite		"Icynene Classic Plus/DC 315"
Name of manufacturer of composite		Icynene Inc. & International Fireproof Technology Inc.
Thickness of composite		54.39mm (determined by **Exova Warringtonfire**)
Weight per unit area of composite		2.16kg/m^2 (determined by **Exova Warringtonfire**)
Coating (test face)	Generic type	Water based fireproof paint
	Product reference	"DC 315"
	Name of manufacturer	International Fireproof Technology Inc.
	Colour reference	"White"
	Number of coats	One
	Application thickness per coat	20 mils (0.51 mm)
	Density	20 kg/m^3
	Application method	Airless sprayer, brush or roller
	Flame retardant details	**See Note 1 below**
	Curing process per coat	8 hours
Insulation	Generic type	Spray foam insulation
	Product reference	"Icynene Classic Plus"
	Detailed description details	Open cell, water blown low density foam
	Name of manufacturer	Icynene Inc.
	Thickness	50mm
	Density	12kg/m^3
	Colour reference	"Off White"
	Flame retardant details	**See Note 2 below**
Brief description of manufacturing process		The foam is a site applied product which is a two component product that is mixed under temperature and pressure to form a spray foam insulation

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

Note 2: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

Test Results

Number of specimens tested

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

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

Six specimens were tested, each of which were subjected to edge exposure to flame with the specimen turned at 90° round its vertical axis and the coated 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, 2 and 3.

On each set of six specimens which were tested, the flame tip did not reach a distance of 150mm before the end of the test.

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 coated face

Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	No	Did not reach	Nil	None	None	48	15
2	No	Did not reach	Nil	None	None	54	18
3	No	Did not reach	Nil	None	None	40	20
4	No	Did not reach	Nil	None	None	40	15
5	No	Did not reach	Nil	None	None	49	13
6	No	Did not reach	Nil	None	None	53	17

Table 2

Test Flame Application Position - Edge of coated face

Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	No	Did not reach	Nil	None	None	55	13
2	No	Did not reach	Nil	None	None	33	17
3	No	Did not reach	Nil	None	None	40	10
4	No	Did not reach	Nil	None	None	40	18
5	No	Did not reach	Nil	None	None	43	19
6	No	Did not reach	Nil	None	None	49	13

Table 3

Test Flame Application Position - Edge Of The Specimen Turned At 90° Round Its Vertical Axis and the coated face exposed.

Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	No	Did not reach	Nil	None	None	69	15
2	No	Did not reach	Nil	None	None	47	15
3	No	Did not reach	Nil	None	None	35	14
4	No	Did not reach	Nil	None	None	86	20
5	No	Did not reach	Nil	None	None	54	15
6	No	Did not reach	Nil	None	None	47	16

Revision History

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

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