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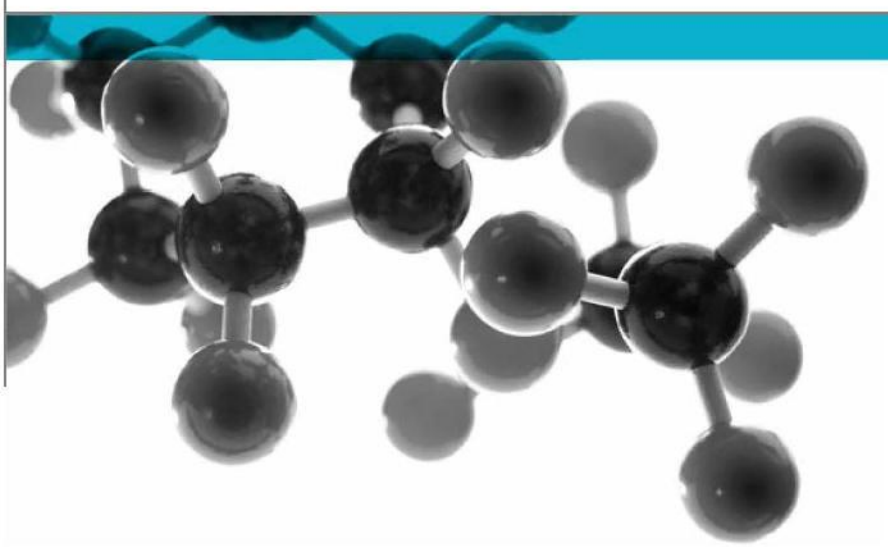
BS EN ISO 11925-2: 2010



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

A Report To: Kingspan Insulation Ltd

Document Reference: 329354

Date: 17th February 2015

Issue No.: 1

Testing
Advising
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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	Weight per unit area or density
Phenolic insulation board	"Kooltherm Insulation With Facing Removed"	40mm	35 kg/m³
Please see page 5 of this test report for the full description of the product tested			

Test Sponsor Kingspan Insulation Limited, Pembridge, Leominster, Herefordshire, HR6 9LA

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 28th May 2013

Signatories

Responsible Officer K. Hughes * Technical Officer	Authorised S. Deeming * Business Unit Head

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

Report Issued: 17th February 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 28th May 2013 at the request of Kingspan Insulation 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 21st May 2013.

Prior to test the specimens were stored for 7 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 loose laid over a calcium silicate based substrate.

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		Phenolic insulation board
Name of manufacturer		Kingspan Insulation Ltd.
Trade name		"Kooltherm"
Batch number		"8100121610"
Foam	Product reference	"Kooltherm Insulation With Facing Removed"
	Generic type	Phenolic foam
	Name of manufacturer	Kingspan Insulation Ltd.
	Thickness	40mm
	Density	35 kg/m³
	Colour	Pinkish
	Flame retardant details	**See Note 1 below**
Substrate details		The specimens were tested with a 12mm thick calcium silicate board, having a density of 870±50 kg/m^3 (as specified in EN 13238: 2010), butted up against the reverse face of the product.
Brief description of manufacturing process		Foam boards made at 70°C under pressure

Note 1: 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 one of the two identical faces exposed.

Six specimens were tested, each of which were subjected to edge exposure to flame with one of the two identical faces 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 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 one of the two identical faces

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	Yes	Did not reach	70	None	None	100	20
2	Yes	Did not reach	50	None	None	90	20
3	Yes	Did not reach	50	None	None	90	20
4	Yes	Did not reach	70	None	None	95	25
5	Yes	Did not reach	80	None	None	90	20
6	Yes	Did not reach	50	None	None	90	20

Table 2

Test Flame Application Position - Edge of one of the two identical faces

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	Yes	Did not reach	50	None	None	70	35
2	Yes	Did not reach	70	None	None	90	30
3	Yes	Did not reach	70	None	None	90	35
4	Yes	Did not reach	70	None	None	100	35
5	Yes	Did not reach	70	None	None	90	30
6	Yes	Did not reach	70	None	None	90	30

Revision History

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Revised By:	Approved By:
Reason for Revision:	

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