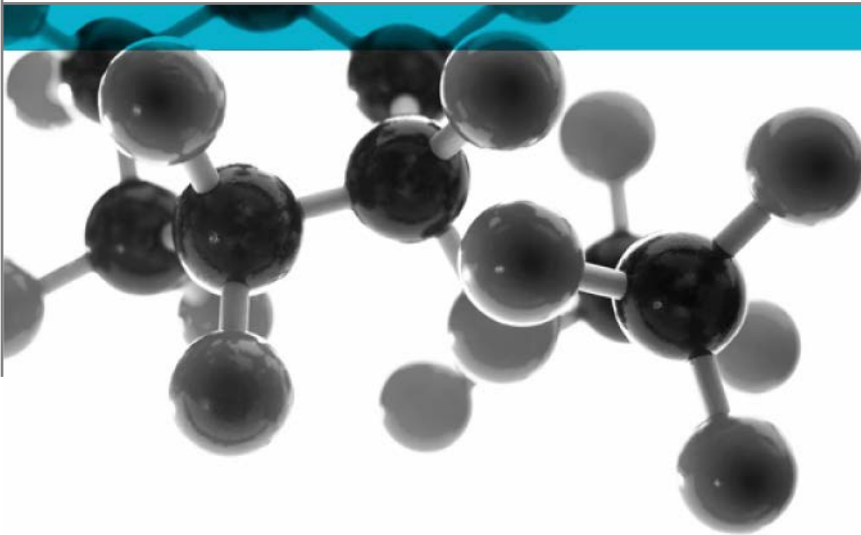


BS EN ISO 11925-2: 2020



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

A Report To: Zenova Ltd

Document Reference: 500656

Date: 13th May 2021

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Executive Summary

Objective To determine the performance of the following product when tested in accordance with BS EN ISO 11925-2:2020.

Generic Description	Product reference	Thickness	Weight per unit area/density or specific gravity
ZENOVA FP Painted on Plywood	"Zenova FP"	9.74mm*	6.29kg/m ² *
Individual components used to manufacture composite:			
Coating	"Zenova FP"	0.75mm	0.75 + - 0.05
Substrate	"Plywood"	9mm	450kg/m ³
*determined by Warringtonfire			
Please see page 5 of this test report for the full description of the product tested			

Test Sponsor Zenova Ltd, 101 Kings Road, Brentwood, CM14 4DR, United Kingdom


Test Results: On the set of six specimens which were subject to surface application, the maximum flame height reached was observed to be 40 ± 1.7 mm.


On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be 15 ± 0.8 mm

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 26th February 2021

Signatories


Responsible Officer G. Morris * Testing Officer


Authorised K. Hughes * Senior Technical Officer

* For and on behalf of [Warringtonfire](#).

Report Issued: 13th May 2021

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Client: Zenova Ltd

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Test Details

Purpose of test	<p>To determine the performance of specimens of a product when they are subjected to the conditions of the test specified in BS EN ISO 11925-2:2020 "Reaction to Fire tests - Ignitability Of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test".</p> <p>The test was performed in accordance with the procedure specified in BS EN ISO 11925-2:2020 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.</p>
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 23 rd March 2021 at the request of Zenova 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. The results stated in this report apply to the sample as received.
Conditioning of specimens	<p>The specimens were received on the 17th February 2021.</p> <p>Prior to test the specimens were stored for 5 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.</p>
Exposed face	The coated face of the specimens was exposed to the flame when the specimens were mounted in the test position.
Condition of specimen edges	Coating applied to test face only.
Intended application	Insulation paint.
Substrate	The specimens were tested applied to a plywood substrate.
Flame application time	The flame was applied for 30 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		ZENOVA FP Painted on Plywood
Product reference of overall composite		"Zenova FP"
Name of manufacturer of overall composite		Zenova Ltd
Thickness of overall composite		9.74mm(determined by Warringtonfire)
Weight per unit area of overall composite		6.29kg/m ² (determined by Warringtonfire)
Coating (test face)	Generic type	Water-based intumescent paint consisting of a mixture of polymers, dispersants and organic compounds
	Product reference	"Zenova FP"
	Name of manufacturer	Zenova Ltd
	Colour reference	"White"
	Number of coats	One
	Application rate	550ml /m ²
	Thickness	0.75mm
	Specific gravity	0.75 + - 0.05
	Application method	Spray gun
	Curing process per coat	2 hours per coat under controlled temperature max 24 hrs
Flame retardant details		See Note 1 below
Substrate	Generic type	Non flame retardant grade plywood which complied BS EN 13238: 2010
	Product reference	"Plywood"
	Name of manufacturer	See Note 2 below
	Thickness	9mm
	Density	450kg/m ³
Brief description of manufacturing process		See Note 2 below

Note 1: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

Note 2: The sponsor was unwilling to provide this information.

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.

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 $40 \pm 1.7\text{mm}$.

On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be $15 \pm 0.8\text{mm}$

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.

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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 (± 1.7 mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	Yes	Did not reach	40	None	None	44	12
2	Yes	Did not reach	40	None	None	53	14
3	Yes	Did not reach	40	None	None	82	19
4	Yes	Did not reach	40	None	None	75	17
5	Yes	Did not reach	40	None	None	55	12
6	Yes	Did not reach	40	None	None	60	12

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 (± 0.8 mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	Yes	Did not reach	10	None	None	90	13
2	Yes	Did not reach	10	None	None	65	20
3	Yes	Did not reach	15	None	None	80	20
4	Yes	Did not reach	15	None	None	110	15
5	Yes	Did not reach	15	None	None	33	14
6	Yes	Did not reach	15	None	None	70	12

Revision History

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