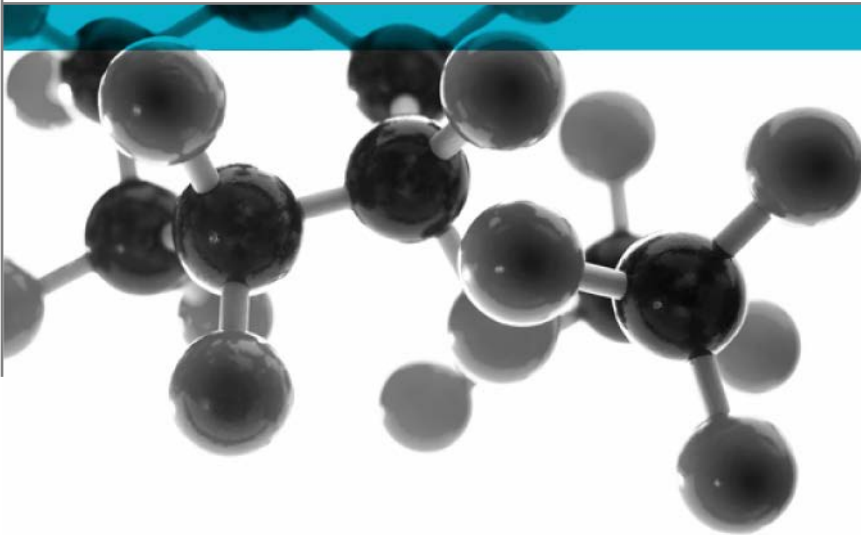


# BS EN ISO 11925-2: 2020



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

A Report To: Zenova Ltd

Document Reference: 500648

Date: 13<sup>th</sup> May 2021

Issue No.: 1

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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 or density
Zenova IP painted on plywood	"Zenova IP"	11mm	6.25kg/m <sup>2</sup>
<b>Individual components used to manufacture composite:</b>			
Top coat	"Zenova IP"	2mm	0.75±0.05
Substrate	"Plywood"	9mm	450kg/m <sup>3</sup>
<b>Please see page 5 of this test report for the full description of the product tested</b>			

**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 50 ± 1.7mm.

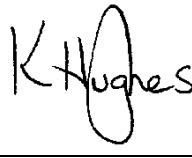
On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be 40 ± 0.8mm

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** 26<sup>th</sup> February 2021

## Signatories


Responsible Officer G. Morris * Testing Officer


Authorised K. Hughes * Senior Technical Officer

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

Report Issued: 13<sup>th</sup> May 2021

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## Test Details

<b>Purpose of test</b>	<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>
<b>Scope of test</b>	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.
<b>Fire test study group/EGOLF</b>	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.
<b>Instruction to test</b>	The test was conducted on the 23 <sup>rd</sup> March 2021 at the request of Zenova Ltd, the sponsor of the test.
<b>Provision of test specimens</b>	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.
<b>Conditioning of specimens</b>	<p>The specimens were received on the 17<sup>th</sup> February 2021.</p> <p>Prior to test the specimens were stored for 6 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>
<b>Exposed face</b>	The coated face of the specimens was exposed to the flame when the specimens were mounted in the test position.
<b>Condition of specimen edges</b>	Coating applied to test face only.
<b>Intended application</b>	Insulation paint.
<b>Substrate</b>	The specimens were tested applied to a plywood substrate.
<b>Flame application time</b>	The flame was applied for 30 seconds.

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## 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 IP Painted on Plywood
Product reference of overall composite		"Zenova IP"
Name of manufacturer of overall composite		Zenova Ltd
Thickness of overall composite		11mm (stated by sponsor) 10.6mm (determined by <a href="#">Warringtonfire</a> )
Weight per unit area of overall composite		6.25kg/m <sup>2</sup> (determined by <a href="#">Warringtonfire</a> )
Coating (test face)	Generic type	Water-based insulating paint consisting of a mixture of polymers, dispersants and organic compounds
	Product reference	"Zenova IP"
	Name of manufacturer	Zenova Ltd
	Colour reference	"White"
	Number of coats	Two
	Application rate	150ml /m <sup>2</sup>
	Thickness per coat	1mm
	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		<b>See Note 1 below</b>
Substrate	Generic type	Non flame retardant grade plywood which complied BS EN 13238: 2010
	Product reference	"Plywood"
	Name of manufacturer	<b>See Note 2 below</b>
	Thickness	9mm
	Density	450kg/m <sup>3</sup>
Brief description of manufacturing process		<b>See Note 2 below</b>

**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

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### 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  $50 \pm 1.7\text{mm}$ .**

**On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be  $40 \pm 0.8\text{mm}$**

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 ( $\pm 1.7$ mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	Yes	Did not reach	50	None	None	70	15
2	Yes	Did not reach	50	None	None	80	17
3	Yes	Did not reach	50	None	None	70	19
4	Yes	Did not reach	40	None	None	60	18
5	Yes	Did not reach	50	None	None	80	15
6	Yes	Did not reach	50	None	None	75	16

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 ( $\pm 0.8$ mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	Yes	Did not reach	40	None	None	110	25
2	Yes	Did not reach	30	None	None	90	26
3	Yes	Did not reach	40	None	None	105	26
4	Yes	Did not reach	30	None	None	105	20
5	Yes	Did not reach	35	None	None	85	30
6	Yes	Did not reach	30	None	None	90	25

## Revision History

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

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Reason for Revision:	

