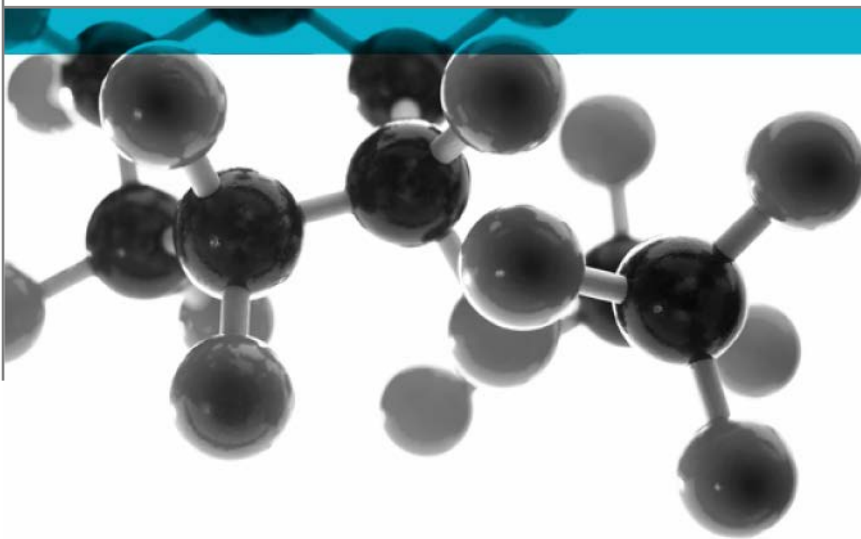


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# BS EN ISO 11925-2: 2010



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

A Report To: Eco-Sol Ltd

Document Reference: 380404

Date: 15<sup>th</sup> March 2017

Issue No.: 2

Page 1

Testing  
Advising  
Assuring



## 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
Siberian larch timber coated on both front and reverse faces with a flame retardant grade coating	"Flametect C-WD+"	16mm	13.19kg/m <sup>2</sup>
<b>Individual components used to manufacture composite:</b>			
Flame retardant (coating)	"Flametect C-WD+"	Not stated	250ml/m <sup>2</sup>
Substrate	"Larch shiplap"	15mm	Not stated
<b>Please see page 5 of this test report for the full description of the product tested</b>			

**Test Sponsor** Eco-Sol Ltd, Cardiff House, Cardiff Road, Barry, Vale of Glamorgan, CF63 2AW

**Test Results:** On the set of six specimens which were subject to surface application, the maximum flame height reached was observed to be 50 ± 0.9mm.



On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be 30 ± 0.9mm

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** 1<sup>st</sup> March 2017

**Reason for revision** This document replaces Issue 1 (dated 13<sup>th</sup> March 2017) of the same number which has been withdrawn. The sponsor has requested that an amendment be made to the description table on page 5.

## Signatories

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

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

Report Issued: 15<sup>th</sup> March 2017

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Document No.: 380404  
 Author: K Hughes  
 Client: Eco-Sol Ltd

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## Test Details

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<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 11925-2:2010 "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 11925-2:2010 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.</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 1 <sup>st</sup> March 2017 at the request of Eco-Sol Ltd, the sponsor of the test.
<b>Provision of test specimens</b>	The specimens were supplied by the sponsor of the test. A representative of <b>Exova Warringtonfire</b> selected the samples for test and witnessed part of the application process during a factory audit, conducted on the 26 <sup>th</sup> January 2017.
<b>Conditioning of specimens</b>	<p>The specimens were received on the 13<sup>th</sup> February 2017.</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>Intended application</b>	Timber cladding/panelling.
<b>Substrate</b>	The specimens were tested without a substrate present.
<b>Flame application time</b>	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		Siberian larch timber coated on both front and reverse faces with a flame retardant grade coating
Product reference		"Flametect C-WD+"
Weight per unit area		13.19kg/m <sup>2</sup> (determined by <b>Exova warringtonfire</b> )
Thickness		16mm (determined by <b>Exova warringtonfire</b> )
Flame retardant (coating)	Generic type	A polymeric blend of organo-phosphate & nitrogen salts'
	Product reference	"Flametect C-WD+"
	Batch number	"IF06450"
	Name of manufacturer	Eco-Sol Ltd
	Colour	"Clear"
	Number of coats	One
	Application rate	250ml/m <sup>2</sup>
	Application method	Spray, brush or roller
	Specific gravity	1.42
	Curing process per coat	Air dry
Substrate	Product reference	"Larch shiplap"
	Generic type	Wood
	Name of supplier	Robert Price Ltd
	Thickness	15mm
	Density	The sponsor of the test was unable to provide this information
Brief description of manufacturing process		The sponsor of the test 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 one of the two identical faces exposed.

Six specimens were tested, each of which were subjected to edge exposure to flame with the 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 the set of six specimens which were subject to surface application, the maximum flame height reached was observed to be  $50 \pm 0.9\text{mm}$ .**

**On the set of six specimens which were subject to edge application, the maximum flame height reached was observed to be  $30 \pm 0.9\text{mm}$**

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 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 ( $\pm 0.9$ mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	Yes	Did not reach	40	None	None	56	16
2	Yes	Did not reach	40	None	None	56	16
3	Yes	Did not reach	40	None	None	57	16
4	Yes	Did not reach	30	None	None	47	16
5	Yes	Did not reach	50	None	None	65	20
6	Yes	Did not reach	40	None	None	54	17

**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 ( $\pm 0.9$ mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	Yes	Did not reach	20	None	None	46	19
2	Yes	Did not reach	20	None	None	45	28
3	Yes	Did not reach	30	None	None	37	28
4	Yes	Did not reach	20	None	None	46	18
5	Yes	Did not reach	20	None	None	47	21
6	Yes	Did not reach	30	None	None	50	24

## Revision History

Issue No : 2	Re-issue Date : 15 <sup>th</sup> March 2017
Revised By: K Hughes	Approved By: S Deeming
Reason for Revision: This document replaces Issue 1 (dated 13 <sup>th</sup> March 2017) of the same number which has been withdrawn. The sponsor has requested that an amendment be made to the description table on page 5.	

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