Reaction to fire test report

Warringtonfire Testing and Certification Limited

Test standard:	EN ISO 11925-2:2020
Test sponsor(s):	Mould Growth Consultants Ltd
Product(s):	Sempatap Thermal 10mm
Report number:	505165
Test date:	19th July 2021
Version:	Two

Quality management

Version	Date	Summary of amendments including reasons		
One	9 November 2021	Description	Initial issue	
			Prepared by	Authorised by
		Name	Gareth Morris	Keith Hughes
		Signature		
			*Signed for and on behalf of Warringtonfire	

Version	Date	Summary of amendments including reasons		
Two	2 December 2021	Description	**This document replaces issue 1 (dated 9 November 2021) of the same number which has been withdrawn. The sponsor has requested an amendment to be made to the information contained within the product description table.**	
			Prepared by	Authorised by
		Name	Gareth Morris	Keith Hughes
		Signature		
			*Signed for and on behalf of Warringtonfire	

Contents

1. Introduction

This report documents the findings of the reaction to fire test of Sempatap Thermal 10mm in accordance with EN ISO 11925-2:2020.

Warringtonfire Testing and Certification Limited (Warringtonfire) performed the test on 19th July 2021 at the request of the test sponsor listed in Table 1.

Table 1 Test sponsor details

Test sponsor	Address
Mould Growth Consultants Ltd	Unit A3 Longmead Business Centre Blenheim Road Epsom, Surrey KT19 9QQ United Kingdom

2. Test specimens

The description of the test specimens is detailed in Table 2. Unless otherwise specified:

- All measurements were taken by Warringtonfire.
- All values quoted are nominal.

Table 2 Test specimen description

General description		Latex foam with coated woven fibreglass face adhered to calcium silicate
Product reference of overall composite		"Sempatap Thermal 10mm"
Name of manufacturer of overall composite		Sempatap
Thickness of overall composite		10mm (Stated by sponsor) 10.63mm (Measured by **WarringtonFire**)
Density / weight per unit area of overall composite		2.08kg/m² (Stated by sponsor) 1.92kg/m² (Measured by **WarringtonFire**)
Scrim	Generic type	Fibreglass
	Product reference	**See Note 1 Below**
	Name of manufacturer	**See Note 1 Below**
	Colour reference	"White"
	Thickness	0.5mm
	Weight per unit area	0.08kg/m²
	Type of weave	**See Note 1 Below**
	Flame retardant details	**See Note 1 Below**
Adhesive	Generic type	Polyvinyl Acetate (PVA)
	Product reference	"Sempatap Adhesive)"
	Name of manufacturer	**See Note 2 Below**
	Colour reference	"Off White"
	Application rate	2.5m²/ltr
	Application method	**See Note 1 Below**
	Flame retardant details	**See Note 3 Below**
	Curing process	Air drying emulsion

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Foam	Generic type	Latex
	Product reference	**See Note 1 Below**
	Name of manufacturer	**See Note 1 Below**
	Thickness	9.5mm
	Weight per unit area	2kg/m²
	Colour reference	"Off White"
	Flame retardant details	**See Note 1 Below**
Adhesive	Generic type	Polyvinyl Acetate (PVA)
	Product reference	"Sempatap Adhesive)"
	Name of manufacturer	**See Note 2 Below**
	Colour reference	"Off White"
	Application rate	2.5m²/ltr
	Application method	**See Note 1 Below**
	Flame retardant details	**See Note 3 Below**
	Curing process	Air drying emulsion
Substrate	Product reference	"Promat – Brandschultzbauplatten; Promatect-H"
	Generic type	Calcium Silicate based board
	Name of manufacturer	Promat
	Thickness	12mm
	Density	870kg/m³
	Flame retardant details	The substrate is inherently flame retardant
Brief description of manufacturing process		Liquid latex foam machine applied to fibreglass scrim and heated

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

Note 2: The sponsor of the test has provided this information but at the specific request of the sponsor these details have been omitted from the report and are instead held on the confidential file relating to this investigation.

Note 3: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

3. Test procedure

Table 3 details the test procedure for this reaction to fire test.

Table 3 Test procedure

Item	Detail
Test standard	The test was performed in accordance with EN ISO 11925-2:2020.
Flame application time	30 s
Test duration	60 s
Product standard and/or EAD	EN 15102
Supplementary standard	EN 13501-1:2018
EGOLF agreements and/or recommendations	Not applicable
Deviations from the test standard	None
Pre-test conditioning	The test specimens were received on 02nd June 2021.
	Before testing, the test specimens were conditioned in accordance with the requirements of EN 13238:2010 at a temperature of 23 ± 2 °C and a relative humidity of 50 ± 5% for a minimum period of 48 hours, until constant mass was achieved.
Sampling / specimen selection	The test specimens were supplied by the test sponsor. Warringtonfire was not involved in any selection or sampling procedure.
Composite bonded by	Warringtonfire
Supplier of the substrate	Warringtonfire
Supplier of the adhesive	The test sponsor
Intended application	Wall and ceiling panels
Test face	The decorative face of the specimens was exposed to the heating conditions of the test when the specimens were mounted in the test position.
Condition of specimen edges	Layered product
Number of replicate tests	Six specimens were tested, each of which were subjected to surface exposure to flame with the decorative face exposed. Six specimens were tested, each of which were subjected to edge exposure to flame with the decorative face exposed.

4. Test results and observations

4.1 Test results

Table 4 shows a summary of the results for the test specimens.

Table 4 Test results

Exposure Condition	Did flame front exceed 150mm above the flame application point?	Were flaming droplets/particles produced that ignited the filter paper?
Surface	No	No
Edge	No	No

4.2 Test observations

No significant observations were noted during the course of testing.

5. Application of test results

5.1 Validity

This document is the original version of this test report and is written in English. In case of doubt the original version prevails over a translation. This document is issued subject to Warringtonfire's standard terms and conditions, which are available at: *Terms and Conditions | Element*.

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, nor can the results be extrapolated and applied to other products.

Reports are statements of fact prepared in accordance with the referenced version of the standards stated in Section 3 of this report. Reports are based upon the information provided to Warringtonfire. Warringtonfire takes no responsibility for the accuracy or completeness of such information.

The results stated in this report apply to the sample as received. Any differences in composition, production process, thickness, density or colour of the product may significantly affect the performance and will therefore invalidate the application of the test results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the test sponsor. The test sponsor should then obtain appropriate documentary evidence of compliance from Warringtonfire or another accredited testing authority. The supplier of the product is responsible for ensuring that the product which is supplied for use is identical to the test specimens that were tested.

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5.2 Uncertainty of measurement

The uncertainty of measurement values determined for EN ISO 11925-2: 2020 are as follows:

Surface application, maximum flame height: ± 1.7mm.

Edge application, maximum flame height: ± 0.8mm

Edge application with specimen turned at 90° from its vertical axis, maximum flame height: ± 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.

Appendix A Test data

A.1 Laboratory record sheet – Surface Application

Specimen Number	Ignition	Time from start of test for flame to reach 150 mm	Extent of flame spread	Flaming droplets / particles that ignite filter paper	Extent of damaged area	
					Height	Width
(-)	(-)	(sec)	(mm)		(mm)	(mm)
1	Yes	Did not reach	50	No	87	15
2	Yes	Did not reach	50	No	90	15
3	Yes	Did not reach	50	No	89	15
4	Yes	Did not reach	50	No	85	15
5	Yes	Did not reach	50	No	92	15
6	Yes	Did not reach	50	No	91	15

A.2 Laboratory record sheet – Edge Application

Specimen Number	Ignition	Time from start of test for flame to reach 150 mm	Extent of flame spread	Flaming droplets / particles that ignite filter paper	Extent of damaged area	
					Height	Width
(-)	(-)	(sec)	(mm)		(mm)	(mm)
1	Yes	Did not reach	30	No	70	40
2	Yes	Did not reach	30	No	72	40
3	Yes	Did not reach	30	No	71	35
4	Yes	Did not reach	30	No	75	39
5	Yes	Did not reach	30	No	78	39
6	Yes	Did not reach	30	No	73	40

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Registered office:

Warringtonfire Testing and Certification Limited
3rd Floor, Davidson Building, 5 Southampton Street, London, WC2E 7HA, United Kingdom
Registered Company No. 11371436

Name & address of issuing laboratory:

Warringtonfire Testing and Certification Limited
Holmesfield Road, Warrington WA1 2DS, United Kingdom

Location of performance of laboratory activities:

Warringtonfire Testing and Certification Limited
Holmesfield Road, Warrington WA1 2DS, United Kingdom

Reaction to Fire laboratory locations:

Frankfurt, Germany
DAkkS accredited laboratory D-PL-18354-01-00
T: +49 69 506 089445

Gent, Belgium
BELAC accredited laboratory 196-TEST
T: +32 9 243 77 50

Melbourne, Australia
NATA accredited laboratory 3277
T: +61 3 9767 1000

Warrington, United Kingdom
UKAS accredited laboratory 0249
T: +44 (0) 1925 655 116