Reaction to fire extended application report

Issuing laboratory: Warringtonfire Testing and Certification Limited

Extended application standards:	CEN/TS 15117: 2005 EN 15725: 2023
Report owner(s):	EnviroDeck t/a CompDeck UK
Product(s):	"Wall Cladding ST 107.5 x 20mm"
Report number:	530552
Version:	1

Quality management

Version	Date	Summary of amendments including reasons		
1	18 October 2023	Description	Initial issue	
			Prepared by	Authorised by
		Name	Michael Walford	Stacey Deeming
		Signature		
			*Signed for and on behalf of Warringtonfire Testing and Certification Limited	

Contents

1. Introduction

This report extends the field of application of the test results obtained for a family of products. Extended application enables the prediction of fire performance on the basis of one or more test results to the same test standards and enables the classification of product ranges and product families.

This extended application report concerns test results obtained in accordance with test methods EN ISO 11925-2: 2020.

The extended application process is carried out in conformity with the following extended application standard: DD CEN/TS 15117: 2005: Guidance on direct and extended application.

Warringtonfire Testing and Certification Limited (Warringtonfire) issued the extended application report at the request of the report owner listed in Table 1.

Table 1 Report owner details

Entity	Address
Report owner	
EnviroDeck t/a CompDeck UK	42a Aston Road, Waterlooville, Hampshire, PO7 7XG, United Kingdom

2. Details of product

2.1 General

The nature of the product is defined as follows:

Intended application: Exterior cladding

End-use application: construction applications excluding floorings and linear pipe thermal insulation

2.2 Product description

The product(s), "Wall Cladding ST 107.5 x 20mm", are described in Table 2 and in the test reports listed in Section 3.1.

Table 2 Product description

Item	Detail
General description	High density polyethylene wall cladding
Product reference	“Wall Cladding ST 107.5 x 20mm”
Detailed description / composition details	55% wood powder + 35% HDPE (High Density Polyethylene) and other 10% chemical additives
Name of manufacturer	Shanghai Seven Trust Industry Co., Ltd
Thickness	5mm (stated by sponsor) 5.67mm (determined by Warringtonfire)
Profile thickness	20mm
Colour (as tested)	“Natural”, “Charcoal” and “Teak”
Flame retardant details	**See Note 1 below**
Brief description of manufacturing process	The material is extruded from the unique high pressure and temperature machine from specially designed mould

Note 1 – The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the product

3. Test reports and test results in support of this extended application

3.1 Test reports

Table 3 details the test reports that have been used in support of this extended application.

Table 3 Test reports

Name of laboratory	Name of sponsor(s)	Test report no.	Test date	Test and extended application standard
Warringtonfire	EnviroDeck t/a CompDeck UK	530280	18 March & 04 April 2023	EN ISO 11925-2: 2020
Warringtonfire	EnviroDeck t/a CompDeck UK	530278	18 March 2023	
Warringtonfire	EnviroDeck t/a CompDeck UK	530279	18 March 2023	

3.2 Deviations from the test standard

The following deviations from the test standard were recorded when conducting the test.

- EN ISO 11925-2: For test reports 530278 and 530279 (indicative reports for EXAP), one specimen was tested for each exposure type instead of six.

3.3 Test samples

Table 4 details the sampling and conditioning details associated with each test that has been used in support of extended application.

Table 4 Sampling and conditioning details

Test report no.	Sampling procedure: Assessment and Verification of Constancy of Performance (AVCP)	Conditioning according to EN 13238: 2010	Number of specimens tested
530280	Not applicable (no product standard)	Constant mass	12
530278	Not applicable (no product standard)	Constant mass	2
530279	Not applicable (no product standard)	Constant mass	2

3.4 Test results

3.4.1 Official test results used for the extended application

Table 5 details the test results that have been used in support of extended application. The fire performance parameters for the envisaged classification can be found in Table 8.

Table 5 Test data

Test method Report number	Parameter	Number of tests	Results	
			Continuous parameters	Compliance with parameters
EN ISO 11925-2: 2020 (30s exposure - Surface) 530280	Fs ≤ 150 mm within 20 s	6	-	Compliant
	No ignition of the paper		-	Compliant
EN ISO 11925-2: 2020 (30s exposure - Edge) 530280	Fs ≤ 150 mm within 20 s	6	-	Compliant
	No ignition of the paper		-	Compliant

Note: '-' symbol confirms this parameter is not applicable.

3.4.2 Comparative test results used for the worst case determinations

The tables below detail the test data that has been used to determine the worst case for each product parameter.

Table 6 EN ISO 11925

Product name Report number	Parameter	Number of tests	Results	
			Continuous parameters	Compliance with parameters
Project specification; "Natural" colour - Surface; 530280	Fs ≤ 150 mm within 20 s	1	-	Compliant
	No ignition of the paper		-	Compliant
Project specification; "Natural" colour - Edge; 530280	Fs ≤ 150 mm within 20 s	1	-	Compliant
	No ignition of the paper		-	Compliant
Project specification; "Teak" colour - Surface; 530278	Fs ≤ 150 mm within 20 s	1	-	Compliant
	No ignition of the paper		-	Compliant
Project specification; "Teak" colour - Edge; 530278	Fs ≤ 150 mm within 20 s	1	-	Compliant
	No ignition of the paper		-	Compliant
Project specification; "Charcoal" colour - Surface; 530279	Fs ≤ 150 mm within 20 s	1	-	Compliant
	No ignition of the paper		-	Compliant
Project specification; "Charcoal" colour - Edge; 530279	Fs ≤ 150 mm within 20 s	1	-	Compliant
	No ignition of the paper		-	Compliant
(*) The results of this sample were re-used in the official test report No. 530280 (as test specimen 1).				

Note: '-' symbol confirms this parameter is not applicable.

4. Extended application

4.1 Principles applied for the extension of the field of application

This extended application procedure is based on:

4.1.1 Method 1

Established influence(s) of product and end-use parameters, according to DD CEN/TS 15117 Annex A

4.1.2 Method 2

Additional test results on one product/end-use parameter in accordance with DD CEN/TS 15117 Section 6.2.1.

4.2 Procedure

4.2.1 Method 1

Table 7 Method 1

Product / End-use application parameter for which an extended application is obtained	Rule or statement as defined in DD CEN/TS 15117, Annex A
Colour	Colour itself and colouring substance may influence the fire performance of products when tested according to EN ISO 11925-2, because a change of colour may change the absorptivity of the product. A product with a dark surface will in general be heated up faster than a product with a light coloured or shiny surface. If the change of composition is negligible, the influence is negligible. The nature of the colouring substance may also have an influence on the fire behaviour. No other general rules are possible.

4.2.2 Method 2

4.2.2.1 EN ISO 11925-2

To evaluate the product parameter ‘colour’, indicative tests were performed according to EN ISO 11925-2 on “Wall Cladding ST 107.5 x 20mm” in “Natural”, “Teak” and “Charcoal” colours. This follows the recommendation set out in EGOLF Recommendation 003-2016, by testing the lightest, darkest and most vivid yellow colours, as there is no most vivid red or white colour options available.

As a conclusion, the “Natural” colour product obtained the worst case results over the other product variation, due to the highest maximal flame spread value (40 mm for Edge application).

Therefore this worst case result has been formally reported in test report no. 530280 and can be considered the upper limit for results of the range of “Wall Cladding ST 107.5 x 20mm” for ‘Teak’, ‘Grey’, ‘Charcoal’, ‘Natural’ and ‘Olive’ colours..

4.3 Field of application

The extended application for the product described in Section 2.2 of this report is valid for the product as such.

This extended application is valid for the following product parameters:

- Thickness: No variation allowed
- Profile thickness: No variation allowed
- Density: No variation allowed
- Colour: 'Teak', 'Grey', 'Charcoal', 'Natural' and 'Olive' only, no further variation allowed (EGOLF 003-2016 Second Choice)
- Construction: No variation allowed
- Composition: No variation allowed

4.4 Fire performance parameters for E

All the products described in Section 2.2 and within the field of application defined in Section 4.3 comply with the fire performance parameters shown in Table 8. The test results can be found in Section 3.4.

Table 8 Fire performance parameters used to classify the product for E

Test method	Parameter	Continuous parameters	Compliance with parameters
EN ISO 11925-2: 2020 (30s exposure)	Extent of flame spread	-	Fs ≤ 150 mm within 20 s
	Flaming droplets / particles that ignite filter paper	-	No ignition of the paper

Note: '-' symbol confirms this parameter is not applicable.

5. Restrictions

The extended application results relate to the behavior of a product/product family under the particular conditions of the test. They are not intended to be the sole criteria for assessing the potential fire hazard of the product/product family in use.

When this report is used to support UKCA marking under the Construction Products Regulation 2011 (retained EU law EUR 2011/305) as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020 and/or 'CE+UK(NI)' marking for Northern Ireland under the Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011, the provisions of those regulations prevail over any conflicting provisions in the designated/harmonised standards and technical specifications.

6. Validity

This document is the original version of this extended application 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 extended application results relate to the behaviour of a product under the particular conditions of the test(s); they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use, nor can the extended application results be extrapolated and applied to other products, or imply suitability for use in configurations not specifically detailed in the extended application report. The extended application is based on the information available to Warringtonfire at the time of the report. Should conflicting or contradictory evidence become available, Warringtonfire reserves the right to unconditionally withdraw the extended application report forthwith upon giving written notice of the same.

Reports are statements of fact prepared in accordance with the referenced version of the standards stated in Section 3 of this report. Test and extended application 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 extended application report apply to the test specimens as received and/or specified in the referenced/supporting test and extended application reports. 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 and extended application results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the report owner. The report owner 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.

This report may only be reproduced in full. Extracts or abridgements shall not be published without the express written permission of Warringtonfire.

The report is issued for the benefit of Warringtonfire's direct customer only, and may not be relied upon by any third parties without Warringtonfire's express written consent.

This document does not represent type approval or certification of the product. Warringtonfire does not give an opinion nor is it Warringtonfire's responsibility to determine or state whether the product meets any particular fire or life safety standards as set out in the Building Regulations or any other appropriate document.

warringtonfire
Proud to be part of element

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

Reaction to Fire laboratory locations:

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

Ghent, 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