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CLASSIFICATION

CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH EN 13501-1:2018

Classification no.	2020-Efectis-R002142[Rev.1]
Sponsor	Holland Composites BV De Serpeling 10 8219 PZ LELYSTAD THE NETHERLANDS
Product name	**Duplicor® sandwich panel**
Prepared by	Efectis Nederland BV
Notified body no.	1234
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Project number	ENL-20-000511
Date of issue	November 2020
Number of pages	6

1. INTRODUCTION

This classification report defines the classification assigned to **Duplicor® sandwich panel** in accordance with the procedures given in EN 13501-1:2018.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The product, **Duplicor® sandwich panel**, is a constructive building panel which can be used for façades, walls and ceilings.

2.2 MANUFACTURER

Holland Composites BV
De Serpeling 10
8219 PZ LELYSTAD
THE NETHERLANDS

2.3 PRODUCT DESCRIPTION

Product description:

- Duplicor Topcoat UHS with a total layer thickness of 200 µm and a consumption of 200 g/m^2;
- Duplicor skin laminate made of glassfibre/Duplicor resin with a nominal layer thickness of 2.5 mm and a density of 1950 kg/m^3;
- PET foam Core with a layer thickness between 15-150 mm and a core density of 50±10 kg/m^3;
- Duplicor skin laminate made of glassfibre/Duplicor resin with a nominal layer thickness of 2.5 mm and a density of 1950 kg/m^3.

The product has a total thickness between 15 and 155 mm and a mass per unit area of approx. 5,2-24 kg/m^2.

3. STANDARDS, REPORTS, RESULTS AND CRITERIA IN SUPPORT OF THIS CLASSIFICATION

3.1 APPLICABLE (PRODUCT) STANDARDS

EN ISO 11925-2:2020	Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test
EN 13823:2010 + A1:2014	Reaction to fire tests for building products - Building products, excluding floorings exposed to the thermal attack by a single burning item
EN 13238:2010	Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates
EN 13501-1:2018	Fire classification of construction products and building elements Part 1: Classification using data from reaction to fire tests

3.2 REPORTS

Name of Laboratories	Name of sponsor	Report ref. no.	Test method
Efectis Nederland BV THE NETHERLANDS	Holland Composites BV THE NETHERLANDS	2020-Efectis-R002140[Rev.1] 2020-Efectis-R002141[Rev.1]	EN ISO 11925-2:2020 EN 13823:2010 + A1:2014

3.3 TEST RESULTS

Test method and test number	Parameter	No. tests	Results	
			Continuous parameter – maximum	Compliance with parameters
EN ISO 11925-2				
Surface flame impingement	Fs ≤150 mm	6	40	-
	Ignition of filter paper		-	Compliant
Edge flame Impingement	Fs ≤150 mm	6	33	-
	Ignition of filter paper		-	Compliant
Side flame Impingement	Fs ≤150 mm	6	28	-
	Ignition of filter paper		-	Compliant

Test method and test number	Parameter	No. tests	Results	
			Continuous parameter – mean (m)	Compliance with parameters
EN 13823				
150 mm	$FIGRA_{0.2MJ}$ [W/s]	3	60	-
	$FIGRA_{0.4MJ}$ [W/s]		48	-
	THR_{600s} [MJ]		1.8	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		0.0	-
	TSP_{600s} [m^2]		36	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant
15 mm	$FIGRA_{0.2MJ}$ [W/s]	1	39	-
	$FIGRA_{0.4MJ}$ [W/s]		30	-
	THR_{600s} [MJ]		1.4	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		0.0	-
	TSP_{600s} [m^2]		43	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant
55 mm	$FIGRA_{0.2MJ}$ [W/s]	1	22	-
	$FIGRA_{0.4MJ}$ [W/s]		22	-
	THR_{600s} [MJ]		1.9	-
	LFS < edge		-	Compliant
	SMOGRA [m^2/s^2]		3.3	-
	TSP_{600s} [m^2]		47	-
	Flaming debris - flaming ≤ 10 s - flaming > 10 s		 - -	 Compliant Compliant

3.4 CLASSIFICATION CRITERIA

Fire classification of construction products and building elements Excluding floorings and linear pipe thermal insulation products			
Classification criteria			
Class Test method(s)	**B**	**C**	**D**
EN ISO 11925-2 Exposure = 30 s	$F_s \leq 150$ mm within 60 s Ignition of the paper in EN ISO 11925-2 results in a d2 classification.		
EN 13823	$FIGRA_{0.2\ MJ} \leq 120$ W/s LFS < edge of specimen $THR_{600s} \leq 7.5$ MJ	$FIGRA_{0.4\ MJ} \leq 250$ W/s LFS < edge of specimen $THR_{600s} \leq 15$ MJ	$FIGRA_{0.4\ MJ} \leq 750$ W/s
Additional classification			
Smoke production	**s1** = SMOGRA ≤ 30 m^2/s^2 and $TSP_{600s} \leq 50$ m^2 ; **s2** = SMOGRA ≤ 180 m^2/s^2 and $TSP_{600s} \leq 200$ m^2; **s3** = not s1 or s2		
Flaming Droplets/particles	**d0** = no flaming droplets/ particles in EN 13823 within 600 s; **d1** = no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600 s; **d2** = not d0 or d1.		

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 11 of EN 13501-1:2018.

4.2 CLASSIFICATION

The product, **Duplicor® sandwich panel**, in relation to its reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets / particles is:

d0

Reaction to fire classification: B– s1, d0

4.3 FIELD OF APPLICATION

This classification is valid for the following product parameters:

Thickness	15-150 mm
Surface density	5,2-24 kg/m^2
Other properties	The panels have to be composed with: • Duplicor Topcoat UHS with a total layer thickness of 200 um and a consumption of 200 g/m^2; • Duplicor skin laminate made of glassfibre/ Duplicor resin with a nominal layer thickness of 2.5 mm and a density of 1950 kg/m^3; • PET foam Core with a layer thickness between 15-150 mm and a core density of 50±10 kg/m3; • Duplicor skin laminate made of glassfibre/ Duplicor resin with a nominal layer thickness of 2.5 mm and a density of 1950 kg/m^3.

This classification is valid for the following end use applications:

Substrate	Not applicable
Application	Free standing
Air gap	Yes
Methods and means of fixing	None
Joints	No
Other aspects of end use conditions	Closed surface, no openings or gaps between components. Sides have to be laminated and coated.

4.4 DURATION OF THE VALIDITY OF THIS CLASSIFICATION REPORT

There are no limitations in time on the validity of this report.

5. LIMITATIONS

This classification document does not represent type approval or certification of the product.

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Project leader Reaction to Fire