

Reaction to fire testing of Allshield Blue Determination of heat of combustion according to EN ISO 1716:2018

Report no.	2022-Efectis-R001323[Rev.1]
Sponsor	Allshield Coatings BV Hoogeveenweg 29 2913 LV Nieuwerkerk aan den IJssel THE NETHERLANDS
Prepared by	Efectis Nederland BV
Notified body no.	1234
Author(s)	A. González Santamaría M.Sc. A.H.L.M. Zwinkels B.Sc.
Project number	ENL-22-000812
Date of issue	February 2023
Number of pages	5

1. PRODUCT IDENTIFICATION

Allshield Blue, further referred to as 'the product'.

This is a revised version of this report. This version supersedes all previous versions of this reports that are hereby withdrawn. Details on the changes can be found in the tables below.

Table 1.1: Revision information

Issue	Date of issue	Report no.
First issue	January of 2023	2022-Efectis-R001323

1.1 FIRST REVISION DETAILED INFORMATION

Table 1.2: First revision information

Chapter of revision	Front page and header
Reason of revision	Change in sponsor
Consequences of revision	New sponsor

2. ABSTRACT

Determination of the heat of combustion properties of the product by testing according to EN ISO 1716:2018, with the objective to obtain the reaction to fire classification according to EN 13501-1:2018.

3. DETAILS OF THE PRODUCT TESTED

3.1 INTENDED APPLICATION

The product will be used as a wall panel/wall covering.

3.2 MANUFACTURER

Allshield Coatings BV
Hoogeveeneweg 29
2913 LV Nieuwerkerk aan den IJssel
THE NETHERLANDS

3.3 PRODUCT DESCRIPTION

According to the sponsor the product is composed of:

-
-
-
-
-
-

The product has a thickness range of 2 to 6 mm, a density of approx. 1750 kg/m³ and a mass per unit area range of approx. 3.5 to 10.5 kg/m². Colour white.

The product is homogeneous.

4. DETAILS OF THE EXAMINATION

4.1 SAMPLES

Sampling procedure:	The sample was prepared by the sponsor. The specimens were prepared by Efectis Nederland.
Age:	At the time of receipt: no information received.
Date of receipt:	July 29, 2022

4.2 SPECIMEN PREPARATION

The received sample was grinded and 10 g were taken.

For each product, the specimens were prepared by mixing about 0.5 g (to the nearest 0.1 mg) of product and about 0.5 g (to the nearest 0.1 mg) of paraffin oil.

4.3 CONDITIONING

Prior to the examinations, the specimens were conditioned over a period of 14 days at a temperature of (23 ± 2) °C and a relative humidity of (50 ± 5) % according to § 4.1 of EN 13238.

4.4 EXAMINATION

Number of tests	A total of three caloric bomb tests were carried out according to EN ISO 1716 per product
Harmonised product standard	Not applicable
Date of examination	August 12, 2022
Location of the examination	Efectis Nederland BV, Bleiwijk, The Netherlands
Performed by	GZA

5. TEST RESULTS

5.1 TEST CONDITIONS

Room temperature 25 °C
Water equivalent E 10108.85 J/K

5.2 PCS VALUE

Nº.	Product	Test	PCS [MJ/kg]
1	Allshield Blue	1	-0.15
		2	-0.29
		3	-0.29
		Average	-0.24

The test results comply with the criteria of chapter 11 of the standard.

5.3 OBSERVATIONS

No particular observations.

6. ASSESSMENT

A1 classification

Classification criteria for the determined heat of combustion	
PCS	Applicable for
≤ 2.0 MJ/kg	For homogeneous products and substantial components of non-homogeneous products
≤ 2.0 MJ/kg	For any external non-substantial component of non-homogeneous products Alternatively, any external non-substantial component having a $PCS \leq 2.0$ MJ/m ² , provided that the product satisfies the following criteria of EN 13823: FIGRA ≤ 20 W/s, and LFS < edge of specimen, and THR _{600s} ≤ 4.0 MJ, and s1, and d0.
≤ 1.4 MJ/m ²	For any internal non-substantial component of non-homogeneous products
≤ 2.0 MJ/kg	For the product as a whole

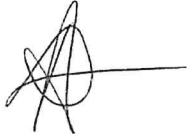
- All substantial components have a $PCS \leq 2.0$ MJ/kg.
- All external non-substantial components have a $PCS \leq 2.0$ MJ/kg.
Alternatively:
All external non-substantial components have a $PCS \leq 2.0$ MJ/m².
Providing that the product satisfies the additional criteria of EN 13823.
- All internal non-substantial components have a $PCS \leq 1.4$ MJ/m².
- The product as a whole has a $PCS \leq 2.0$ MJ/kg.

7. CONCLUSIONS

A formal classification is to be assessed in accordance with EN 13501-1, "Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests".

Remark:

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.



A. González Santamaría M.Sc.
Project leader Reaction to Fire



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

Classification no.	2022-Efectis-R001328[Rev.1]
Sponsor	Allshield Coatings BV Hoogeveeneweg 29 2913 LV Nieuwerkerk aan den IJssel THE NETHERLANDS
Product name	Allshield Blue
Prepared by	Efectis Nederland BV
Author(s)	A. González Santamaría M.Sc. A.H.L.M. Zwinkels B.Sc.
Project number	ENL-22-000812
Date of issue	February 2023
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1. INTRODUCTION

This classification report defines the classification assigned to Allshield Blue in accordance with the procedures given in EN 13501-1:2018.

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Table 1.1: Revision information

Issue	Date of issue	Report no.
First issue	January of 2023	2022-Efectis-R001328

1.1 FIRST REVISION DETAILED INFORMATION

Table 1.2: First revision information

Chapter of revision	Front page and header
Reason of revision	Change in sponsor
Consequences of revision	New sponsor

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The product, Allshield Blue, is defined as a wall panel/wall covering.

2.2 MANUFACTURER/IMPORTER

Allshield Coatings BV
Hoogeveeneweg 29
2913 LV Nieuwerkerk aan den IJssel
THE NETHERLANDS

2.3 PRODUCT DESCRIPTION

According to the sponsor the product is composed of:



The product has a thickness range of 2 to 6 mm, a density of approx. 1750 kg/m³ and a mass per unit area range of approx. 3.5 to 10.5 kg/m². Colour white.
The product is homogeneous.

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

3.1 APPLICABLE (PRODUCT) STANDARDS

EN ISO 1716:2018	Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value).
EN ISO 1182:2010	Reaction to fire tests for products - Non-combustibility test. The classification is temporarily stated without RvA accreditation.
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	Allshield Coatings BV THE NETHERLANDS	2022-Efectis-R001323[Rev.1] 2022-Efectis-R001324[Rev.1]	EN ISO 1716:2018
Efectis France France		EFR-22-003145-1-NC	EN ISO 1182:2010

3.3 TEST RESULTS

Test method and parameter				
EN ISO 1716	No. tests	Results		
		Continuous parameter – mean (m)	Compliance with parameters	
The product is homogeneous				
Product as a whole	[MJ/kg]		0.0	Compliant
EN ISO 1182				
Temperature rise (ΔT)	[°C]		1.1	Compliant
Mass loss (Δm)	[%]		14.0	Compliant
Sustained flaming	[s]		0	Compliant

3.4 CLASSIFICATION CRITERIA

Fire classification of construction products and building elements Excluding floorings and linear pipe thermal insulation products			
Class	Test method(s)	Classification criteria	Additional classification
A1	EN ISO 1182 ^a and	$\Delta T \leq 30\text{ °C}$; and $\Delta m \leq 50\%$; and $t_f \leq 0\text{ s}$	-
	EN ISO 1716	$PCS \leq 2.0\text{ MJ/kg}$ ^a and $PCS \leq 2.0\text{ MJ/kg}$ ^{b,c} and $PCS \leq 1.4\text{ MJ/m}^2$ ^d and $PCS \leq 2.0\text{ MJ/kg}$ ^e	-
^a For homogeneous products and substantial components of non-homogeneous products. ^b For any external non-substantial component of non-homogeneous products. ^c Alternatively, any external non-substantial component having a $PCS \leq 2.0\text{ MJ/m}^2$, provided that the product satisfies the following criteria of EN 13823: $FIGRA \leq 20\text{ W/s}$, and $LFS < \text{edge of specimen}$, and $THR_{600s} \leq 4.0\text{ MJ}$, and $s1$, and $d0$. ^d For any internal non-substantial component of non-homogeneous products. ^e For the product as a whole.			

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, **Allshield Blue**, in relation to its reaction to fire behaviour is classified:

Reaction to fire classification: A1

4.3 FIELD OF APPLICATION

This classification is valid for the following product parameters:

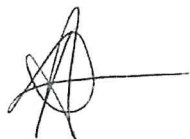
Thickness	2 to 6 mm
Surface density	3.5 to 10.5 kg/m ²
Colour	White

4.4 DURATION OF THE VALIDITY OF THIS CLASSIFICATION REPORT

Consult classification standard and national laws and regulations for limitations on the period of validity of the classification.

5. LIMITATIONS

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



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Reaction to fire testing of Allshield Blue Determination of heat of combustion according to EN ISO 1716:2018.

Report no.	2022-Efectis-R001324[Rev.1]
Sponsor	Allshield Coatings BV Hoogeveenweg 29 2913 LV Nieuwerkerk aan den IJssel THE NETHERLANDS
Prepared by	Efectis Nederland BV
Notified body no.	1234
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First issue	January of 2023	2022-Efectis-R001324

1.1 FIRST REVISION DETAILED INFORMATION

Table 1.2: First revision information

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2. ABSTRACT

Determination of the heat of combustion properties of the product by calculation according to EN ISO 1716:2018, with the objective to obtain the reaction to fire classification according to EN 13501-1:2018.

3. DETAILS OF THE PRODUCT TESTED

3.1 INTENDED APPLICATION

The product will be used as a wall panel/wall covering.

3.2 MANUFACTURER

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According to the sponsor the product is composed of:



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The product is homogeneous.

4. DETAILS OF THE EXAMINATION

4.1 SAMPLES

Sampling procedure: The sample was submitted by the sponsor. The specimens were prepared by Efectis Nederland.

Age: At the time of receipt: no information received.

Date of receipt: July 29, 2022

4.2 REPORTS

Name of Laboratories	Name of sponsor	Report ref. no.	Test method
Efectis Nederland	Allshield Coatings BV	2022-Efectis-R001323	EN ISO 1716:2018

4.3 PCS VALUES

Component	[MJ/kg]
Allshield Blue	-0.24

4.4 PCS CALCULATION

Note: the PCS has been given on the product with the most critical colour.

No.	Component	Non substantial - Substantial	PCS [MJ/kg] (kg component)	Mass [kg/m ²] (m ² product)	PCS [MJ/m ²] (m ² product)
1	Allshield Blue	Substantial	-0.24	10.5*	-2.52

Total PCS	-2.52	MJ/m ²
Total weight	10.5*	kg/m ²
Total PCS per kg product	-0.24	MJ/kg
Coloured cells in the tables above contain classification parameters. * Calculation performed on the most critical variant, 6 mm thick		

5. ASSESSMENT

A1 classification

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PCS	Applicable for
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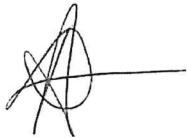
- All substantial components have a PCS ≤ 2.0 MJ/kg.
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Alternatively:
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Providing that the product satisfies the additional criteria of EN 13823.
- All internal non-substantial components have a PCS ≤ 1.4 MJ/m².
- The product as a whole has a PCS ≤ 2.0 MJ/kg.

6. CONCLUSIONS

A formal classification is to be assessed in accordance with EN 13501-1, "Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests".

Remark:

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.



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