



Institut für Brandschutztechnik  
und Sicherheitsforschung

# CLASSIFICATION OF REACTION TO FIRE

in accordance with EN 13501-1<sup>1)</sup>

Product name:  
**Aluminium-composite panel**  
**„DILITE® und DIBOND®“**

**Classification Report no.: 323092202-A-en**

Date: 22.01.2024

Technician: Ing. Gernot AUZINGER / KO

DW: 818

**SPONSOR:** **3A Composites GmbH**  
Alusingenplatz 1  
78224 Singen  
GERMANY

**PREPARED BY:** IBS - Institut für Brandschutztechnik  
und Sicherheitsforschung GmbH  
Petzoldstraße 45, 4020 Linz

**NOTIFIED BODY NO.:** 1322

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1) EN 13501-1:2018



## 1. Introduction

This classification report defines the classification assigned to the construction product „**DILITE® und DIBOND®**“ in accordance with the procedure given in 13501-1:2018.

## 2. Details of the classified product

### 2.1. General

The construction product „**DILITE® und DIBOND®**“ is of the product type “wall and ceiling coverings” (External Wall Claddings).

### 2.2. Product Description

The construction product „**DILITE® und DIBOND®**“ consists of a polyethylen core with two external aluminium layers approx. 0,2 mm to 0,3 mm thickness.

The construction product „**DILITE® und DIBOND®**“ is specified below and in the reports referred to under item 3.1. referenced to demonstrate the classification.



### 3. Reports and results in support of this classification

#### 3.1. Reports

Name of laboratory <sup>1</sup>	Name of sponsor	Report ref. no.	Test method and date Field of application rules and date
IBS GmbH	3A Composites GmbH	323092202-1 Edition of 22.01.2024	EN 13823 vom 01.05.2020
Warringtonfire Ltd.	3A Composites GmbH	501859 Edition of 13.05.2023	EN 13823 vom 01.05.2020
Warringtonfire Ltd.	3A Composites GmbH	501860 Edition of 13.05.2023	EN ISO 11925-2 vom 15.06.2020
Warringtonfire Ltd.	3A Composites GmbH	501862 Edition of 09.06.2023	EN 13823 vom 01.05.2020
Warringtonfire Ltd.	3A Composites GmbH	501863 Edition of 09.06.2023	EN ISO 11925-2 vom 15.06.2020

<sup>1</sup> **Name / address and notification number / status of testing laboratory in alphabetic order:**

- IBS: IBS - Institut für Brandschutztechnik und Sicherheitsforschung GmbH, Petzoldstraße 45, A-4020 Linz; Notified Body No.: 1322
- Warringtonfire Ltd, Helmesfield Road, GB-WA1 2DS Warrington, Notified Body No.: 0249

### 3.2. Results

Test method and test report no.	Parameter	Number of tests	Results	
			continuous parameter mean (m)	compliance with parameters / Classification criteria (as defined in EN 13501-1)
EN 13823 323092202-1	FIGRA <sub>0,2</sub> [W/s]	4	322	A2: ≤ 120 W/s B: ≤ 120 W/s
	FIGRA <sub>0,4</sub> [W/s]		322	C: ≤ 250 W/s D: ≤ 750 W/s
	THR <sub>600s</sub> [MJ]		20,0	A2: ≤ 7,5 MJ B: ≤ 7,5 MJ C: ≤ 15 MJ
	SMOGRA [m <sup>2</sup> /s <sup>2</sup> ]		8	s1: ≤ 30 m <sup>2</sup> /s <sup>2</sup> s2: ≤ 180 m <sup>2</sup> /s <sup>2</sup>
	TSP <sub>600s</sub> [m <sup>2</sup> ]		64	s1: ≤ 50 m <sup>2</sup> s2: ≤ 200 m <sup>2</sup>
	Flaming droplets / particles		no / d0	Compliant d0: No flaming droplets / particles
	LFS		Compliant	Compliant < edge of specimen
EN 13823 501859	FIGRA <sub>0,2</sub> [W/s]	3	389	A2: ≤ 120 W/s B: ≤ 120 W/s
	FIGRA <sub>0,4</sub> [W/s]		389	C: ≤ 250 W/s D: ≤ 750 W/s
	THR <sub>600s</sub> [MJ]		28,4	A2: ≤ 7,5 MJ B: ≤ 7,5 MJ C: ≤ 15 MJ
	SMOGRA [m <sup>2</sup> /s <sup>2</sup> ]		13	s1: ≤ 30 m <sup>2</sup> /s <sup>2</sup> s2: ≤ 180 m <sup>2</sup> /s <sup>2</sup>
	TSP <sub>600s</sub> [m <sup>2</sup> ]		106	s1: ≤ 50 m <sup>2</sup> s2: ≤ 200 m <sup>2</sup>
	Flaming droplets / particles		no / d0	Compliant d0: No flaming droplets / particles
	LFS		Compliant	Compliant < edge of specimen

<b>EN ISO 11925-2</b> 501860  Flame exposure time 30s	Fs Edge flame attack	6	(Max-Value) 0 mm	Compliant Fs ≤ 150 mm
	Flaming droplets / particles		no / d0	Compliant d0: No flaming droplets / particles
	Fs Surface flame attack	6	(Max-Value) 0 mm	Compliant Fs ≤ 150 mm
	Flaming droplets / particles		no / d0	Compliant d0: No flaming droplets / particles
<b>EN 13823</b> 501862	FIGRA <sub>0,2</sub> [W/s]	3	354	A2: ≤ 120 W/s B: ≤ 120 W/s
	FIGRA <sub>0,4</sub> [W/s]		354	C: ≤ 250 W/s D: ≤ 750 W/s
	THR <sub>600s</sub> [MJ]		30,4	A2: ≤ 7,5 MJ B: ≤ 7,5 MJ C: ≤ 15 MJ
	SMOGRA [m <sup>2</sup> /s <sup>2</sup> ]		9	s1: ≤ 30 m <sup>2</sup> /s <sup>2</sup> s2: ≤ 180 m <sup>2</sup> /s <sup>2</sup>
	TSP <sub>600s</sub> [m <sup>2</sup> ]		88	s1: ≤ 50 m <sup>2</sup> s2: ≤ 200 m <sup>2</sup>
	Flaming droplets / particles		no / d0	Compliant d0: No flaming droplets / particles
	LFS		Compliant	Compliant < edge of specimen
<b>EN ISO 11925-2</b> 501863  Flame exposure time 30s	Fs Edge flame attack	6	(Max-Value) 0 mm	Compliant Fs ≤ 150 mm
	Flaming droplets / particles		no / d0	Compliant d0: No flaming droplets / particles
	Fs Surface flame attack	6	(Max-Value) 0 mm	Compliant Fs ≤ 150 mm
	Flaming droplets / particles		no / d0	Compliant d0: No flaming droplets / particles

#### 4. Classification and field of application

##### 4.1. Reference of classification

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

##### 4.2. Classification

The construction product „**DILITE® und DIBOND®**“ in relation to its reaction to fire behavior is classified:

**D**

The additional classification in relation to smoke production is:

**S2**

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

**d0**

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation products is:

Fire behaviour		Smoke production			Flaming droplets / particles	
<b>D</b>	-	<b>s</b>	<b>2</b>	,	<b>d</b>	<b>0</b>

i.e.: **D – s2, d0**

**Reaction to fire classification: D – s2, d0**

### 4.3. Field of application

This classification is valid for the following product parameters:

- Product structure as tested (see test reports according to 3.1).
- Panel dimension at least 0,1 m<sup>2</sup> (see test reports according to 3.1).
- Versions from 2 - 6 mm thickness.
- Valid for all colours and paint variants as well as rolled mat and anodized Surface.
- Horizontal and vertical joints as well as open joints up to 20 mm are permitted.
- With or without open edges.

This classification is valid for the following end use applications:

- The construction product may only be used on solid mineral substrates or substrates corresponding to classes A1 or A2-s1, d0.
- Assembly may only be carried out mechanically, using metal fasteners at the same or closer distance than that carried out in the test. Substructures made of uncoated metal profiles in accordance with Euro class A1 are permitted.
- With or without an air space at the back
- With or without cavities.
- Not horizontal as flooring.
- As a wall and ceiling element.

Areas of application according to the manufacturer's information:

- Direct digital printing/screen printing/photo printing
- Laminations
- Indoor and outdoor advertising signs
- Trade fair construction
- Interior design / shop fitting / shop design

## 5. Limitations

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



Used in combination with other building materials, with other air gaps/voids, types of fixation joints, thickness or density ranges, coatings than specified in the referencing test reports, the reaction to fire may be influenced negatively, so that the classification assigned in section 4.2 will no longer be valid

The fire performance with other parameters than those specified above must be tested/verified separately.

## **6. Validity**

The specifications for and evaluation of fire tests are subject to continuous development. This may result in changes in related legislation.

For these reasons, it is recommended that the user verifies the factual accuracy of test reports and classification reports that are older than **5 years**.

The test laboratory having issued these reports may, at the owner's request, carry out a review of the associated test methods or the classification basis to ensure compliance with current regulations and - if necessary - re-issue a report.

If there is no continuous verification of the reaction to fire by the manufacturer, this classification report will lose its validity in case of any change in the production process, the production environment, the raw materials or the suppliers of the components.

In general, the validity shall expire if the customer undertakes improper technical modifications to the construction product which exceed or fall below the composition values underlying this Classification Report (refer to the test reports).

Furthermore, the validity shall also expire following restrictive provisions of forthcoming European product standards.

**IBS – INSTITUT FÜR BRANDSCHUTZTECHNIK  
UND SICHERHEITSFORSCHUNG GESELLSCHAFT M.B.H.  
Akkreditierte Prüf-, Inspektions- und Zertifizierungsstelle**

Ing. Gernot AUZINGER  
Technician

Ing. Josef STOCKINGER  
Monitoring