

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

## Test Sponsor:

Jadara Building Materials Co.  
Dammam Industrial Area 2  
Kingdom of Saudi Arabia  
T: +966 55 502 9208  
Website: [www.deltasaudi.com](http://www.deltasaudi.com)

## Test Material / Assembly:

4mm thick Delta Aluminium Composite Panel



**THOMAS BELL-WRIGHT  
INTERNATIONAL CONSULTANTS**

Issue Date: 22-May-23

Classification Report Reference No: WL072-4

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## Memberships

**Members of European Group of Organization for Fire Testing, Inspection and Certification**

[www.egolf.org.uk](http://www.egolf.org.uk)

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## 1. INTRODUCTION

This classification report defines the classification assigned to 4mm thick Delta Aluminium Composite Panel in accordance with the procedures given in BS EN 13501-1:2018: Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests.

## 2. SPONSOR

Name: Jadara Building Materials Co.  
Address: Dammam Industrial Area 2  
Kingdom of Saudi Arabia  
T: +966 55 502 9208  
Website: www.deltasaudi.com

## 3. TESTING LABORATORY

Name: Thomas Bell-Wright International Consultants (TBWIC)  
Address: Corner of 46th and 47th Streets,  
Jebel Ali Industrial Area 1  
Dubai, UAE  
T: T: +971 04 821 5777  
Website: www.bell-wright.com

## 4. DETAILS OF CLASSIFIED PRODUCT

*Note: The testing laboratory does not hold any responsibility for the information that has been provided by the test sponsor which could not be verified by the testing laboratory, as this could affect the validity of the test result. All information that could not be verified will be indicated by an asterisk (\*) mark.*

<b>Product Description</b>		4mm thick Delta Aluminium Composite Panel*	
<b>Product Reference</b>		Delta Aluminium Composite Panels*	
<b>Manufacturer</b>		Jadara Building Materials Co.*	
<b>Mass per unit area</b>		7.16 kg/m <sup>2</sup> (measured by TBWIC)	
<b>Thickness</b>		4mm (measured by TBWIC)	
<b>Color</b>		White (observed by TBWIC)	
<b>Product Details</b>	<b>Top Coat (fireside)</b>	Product Name	Delta*
		Manufacturer	Jadara Building Materials Co.*
		Thickness	27 µm* (stated)
		Density	2.70 g/cm <sup>3</sup> * (stated)
	<b>Top Aluminium skin</b>	Product Name	Aluminium Top Coil*
		Manufacturer	
		Thickness	0.28mm* (stated)
		Mass per unit area	0.83 kg/m <sup>2</sup> * (stated)
	<b>Adhesive</b>	Product Name	Adhesive Film*
		Manufacturer	



		Thickness	0.05mm* (stated)	
		Mass per unit area	0.092 kg/m <sup>2</sup> * (stated)	
	<b>Fire Retardant Core</b>	Product Name	Fire Retardant Core*	
		Manufacturer		
		Thickness	4mm* (stated)	
		Mass per unit area	5.10 kg/m <sup>2</sup> * (stated)	
	<b>Adhesive</b>	Product Name	Adhesive Film*	
		Manufacturer		
		Thickness	0.08mm* (stated)	
		Mass per unit area	0.092 kg/m <sup>2</sup> * (stated)	
	<b>Back Aluminium skin</b>	Product Name	Aluminium Back Coil*	
		Manufacturer		
		Thickness	0.28mm* (stated)	
		Mass per unit area	0.79 kg/m <sup>2</sup> * (stated)	
	<b>Back Coat</b>	Product Name	Delta*	
		Manufacturer	Jadara Building Materials Co.*	
Thickness		31 µm* (stated)		
Density		2.70 g/cm <sup>3</sup> * (stated)		

**Note:** The sponsor has declared that the sample submitted for testing has been selected by Jadara Building Materials Co., for the requirement given in Section 6.7 of SASO 2752/2019 (Aluminum Composite Panel for External Cladding and Internal Finish) standard.

## 5. SPECIMEN PREPARATION PROCEDURE

The choice and design and the definition of the specimen have been made by Jadara Building Materials Co., and TBWIC testing laboratory has not been involved in the selection or design of the specimen. The results of the test apply only to the samples as received.

*Note: There are contexts where information has been provided by the sponsor and verification of information has been done through either technical datasheet or other document submission, or as indicated directly by the sponsor. For this reason, materials have been tested in an as-received condition and TBWIC bears no liability for the legitimacy of the submitted information.*

## 6. REPORT & TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

### 6.1. Reports

Name of Laboratory	Test Sponsor	Test Report No.	Test Method/Field of Application Rules
Thomas Bell-Wright International Consultants (TBWIC)	Jadara Building Materials Co.	WL072-2	BS EN 13823:2020
		WL072-3	BS EN ISO 11925-2



## 6.2. Results

Test Method	Test Parameters	No. of tests	Results	
			Continuous parameter-mean (m)	Compliance parameters
BS EN 13823:2020	$FIGRA_{0.2MJ} \leq 120$ W/s	3	31	Compliant
	$THR_{600s} \leq 7.5$ MJ	3	2.8	Compliant
	Lateral Flame Spread < Edge of specimen	3	< Edge of specimen	Compliant
	<b>CRITERIA for subclass "s1"</b>			
	$SMO_{GRA} \leq 30$ m <sup>2</sup> /s <sup>2</sup> <i>Note1</i>	3	0	Compliant
	$TSP_{600s} \leq 50$ m <sup>2</sup> <i>Note1</i>	3	12	Compliant
	<b>CRITERIA for subclass "d0"</b>			
	Flaming droplets/Particles within 600s	3	Nil	Compliant

**Note 1:** Corrected value as per ANNEX A, Clause A.6.1.2 of BS EN 13823:2020.

Test Method	Parameter	No. of tests	Results	
			Continuous parameter-mean (m)	Compliance parameters
BS EN ISO 11925-2:2020	$F_s \leq 150$ mm within 60 seconds	12	$F_s \leq 150$ mm	Compliant
	Ignition of filter paper		Nil	Compliant

## 7. CLASSIFICATION & FIELD OF APPLICATION

### 7.1. Reference of classification

This classification has been carried out in accordance with clause 8 of EN 13501-1:2018.

### 7.2. Classification

The product, 4mm thick Delta Aluminium Composite Panel, in relation to its reaction to fire behavior are classified;

Fire behavior		Smoke Production		Flaming droplets
---------------	--	------------------	--	------------------



B	-	s	1	,	d	0
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**Reaction to fire classification: B – s1, d0**

### 7.3. Field of application

This classification is valid for the following end use applications:

- i. Construction applications

This classification is also valid for the following product parameters:

Overall Product Thickness	No variation allowed
Product Density	No variation allowed
Product Composition	No variation allowed
Product Construction	No variation allowed
Color	No variation allowed
Joints	Results valid for material with or without vertical & horizontal joints of $\leq 15$ mm



## 8. LIMITATIONS

This document does not represent type approval or certification of the product. Similarly, the BS EN 13823 & BS EN ISO 11925-2 fire tests and related work which are a subject of this classification report have been conducted under Thomas Bell-Wright International Consultant’s ISO 17025 UKAS accreditation scheme and quality management system. However, pursuant to UKAS Technical Bulletin *BS EN 13501 & BR 135 Classification Documents (Dated 02-Feb-2022)*, classification documents are completed on an unaccredited basis because they are not themselves test procedures. As such, this document is prepared on an unaccredited basis.

This report and all records of the test to which it relates may be not be retained by TBWIC further than 5 years from the date of testing.

This test report is respectfully submitted by: Thomas Bell-Wright International Consultants

Prepared by:

Reviewed and Authorized by:

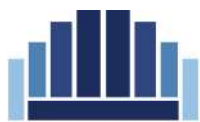
Malak Megly  
Junior Fire Testing Engineer



Suketa Tyagi  
Manager – Reaction to Fire

Report Revision Tracking		
Revision No.	Date Issued	Notes & Amendments
Rev. 00	22-May-23	This is the first issue of the report. No revisions are included.





## 9. ANNEXURE A

Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products

Class	Test method(s)	Classification criteria	Additional classification
<b>A1</b>	EN ISO 1182 <sup>a</sup> and	$\Delta T \leq 30 \text{ }^\circ\text{C}$ ; and $\Delta m \leq 50 \%$ ; and $t_f = 0$ (i.e. no sustained flaming)	-
	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 $PCS \leq 2,0 \text{ MJ/kg}^e$	-
<b>A2</b>	EN ISO 1182 <sup>a</sup> or	$\Delta T \leq 50 \text{ }^\circ\text{C}$ ; and $\Delta m \leq 50 \%$ ; and $t_f \leq 20 \text{ s}$	-
	EN ISO 1716 and	$PCS \leq 3,0 \text{ MJ/kg}^a$ and $PCS \leq 4,0 \text{ MJ/m}^2^b$ and $PCS \leq 4,0 \text{ MJ/m}^2^d$ and $PCS \leq 3,0 \text{ MJ/kg}^e$	-
	EN 13823	$FIGRA \leq 120 \text{ W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 7,5 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
<b>B</b>	EN 13823 and	$FIGRA \leq 120 \text{ W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 7,5 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> : Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	
<b>C</b>	EN 13823 and	$FIGRA \leq 250 \text{ W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 15 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> : Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	
<b>D</b>	EN 13823 and	$FIGRA \leq 750 \text{ W/s}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> : Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	
<b>E</b>	EN ISO 11925-2 <sup>i</sup> : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	Flaming droplets/particles <sup>h</sup>
<b>F</b>	EN ISO 11925-2 <sup>i</sup> : Exposure = 15 s	$F_s > 150 \text{ mm}$ within 20 s	-

<sup>a</sup> For homogeneous products and substantial components of non-homogeneous products.

<sup>b</sup> For any external non-substantial component of non-homogeneous products.

<sup>c</sup> 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  $s_1$ , and  $d_0$ .



<sup>d</sup> For any internal non-substantial component of non-homogeneous products.

<sup>e</sup> For the product as a whole.

<sup>f</sup> In the last phase of the development of the test procedure, modifications of the smoke measurement system have been introduced, the effect of which needs further investigation. This may result in a modification of the limit values and/or parameters for the evaluation of the smoke production.

**s1** = SMOGRA  $\leq 30\text{m}^2/\text{s}^2$  and TSP<sub>600s</sub>  $\leq 50\text{m}^2$  ; **s2** = SMOGRA  $\leq 180\text{m}^2/\text{s}^2$  and TSP<sub>600s</sub>  $\leq 200\text{m}^2$ ; **s3** = not s1 or s2

<sup>g</sup> **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.

Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

<sup>h</sup> Pass = no ignition of the paper (no classification);

Fail = ignition of the paper (d2 classification).

<sup>l</sup> Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.

---- End of Classification Report ----

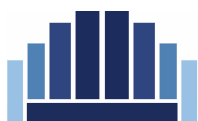
# CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH BS EN 13501-1:2018

## Test Sponsor:

Jadara Building Materials Co.  
Dammam Industrial Area 2  
Kingdom of Saudi Arabia  
T: +966 55 502 9208  
Website: [www.deltasaudi.com](http://www.deltasaudi.com)

## Test Material / Assembly:

4mm thick Delta Plus Aluminium Composite Panel



**THOMAS BELL-WRIGHT  
INTERNATIONAL CONSULTANTS**

Issue Date: 22-May-23  
Classification Report Reference No: WL072-8

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## 1. INTRODUCTION

This classification report defines the classification assigned to 4mm thick Delta Plus Aluminium Composite Panel in accordance with the procedures given in BS EN 13501-1:2018: Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests.

## 2. SPONSOR

Name: Jadara Building Materials Co.  
Address: Dammam Industrial Area 2  
Kingdom of Saudi Arabia  
T: +966 55 502 9208  
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## 3. TESTING LABORATORY

Name: Thomas Bell-Wright International Consultants (TBWIC)  
Address: Corner of 46th and 47th Streets,  
Jebel Ali Industrial Area 1  
Dubai, UAE  
T: T: +971 04 821 5777  
Website: www.bell-wright.com

## 4. DETAILS OF CLASSIFIED PRODUCT

*Note: The testing laboratory does not hold any responsibility for the information that has been provided by the test sponsor which could not be verified by the testing laboratory, as this could affect the validity of the test result. All information that could not be verified will be indicated by an asterisk (\*) mark.*

<b>Product Description</b>		4mm thick Delta Plus Aluminium Composite Panel*	
<b>Product Reference</b>		Delta Aluminium Composite Panels*	
<b>Manufacturer</b>		Jadara Building Materials Co.*	
<b>Mass per unit area</b>		7.79 kg/m <sup>2</sup> (measured by TBWIC)	
<b>Thickness</b>		4mm (measured by TBWIC)	
<b>Color</b>		White (observed by TBWIC)	
<b>Product Details</b>	<b>Top Coat (fireside)</b>	Product Name	Delta Plus*
		Manufacturer	Jadara Building Materials Co.*
		Thickness	38 µm* (stated)
		Density	2.70 g/cm <sup>3</sup> * (stated)
	<b>Top Aluminium skin</b>	Product Name	Aluminium Top Coil*
		Manufacturer	
		Thickness	0.45mm* (stated)
		Mass per unit area	1.328 kg/m <sup>2</sup> * (stated)
	<b>Adhesive</b>	Product Name	Adhesive Film*
		Manufacturer	



		Thickness	0.05mm* (stated)	
		Mass per unit area	0.092 kg/m <sup>2</sup> * (stated)	
	<b>Fire Retardant Core</b>	Product Name	Fire Retardant Core*	
		Manufacturer		
		Thickness	4mm* (stated)	
		Mass per unit area	5.10 kg/m <sup>2</sup> * (stated)	
	<b>Adhesive</b>	Product Name	Adhesive Film*	
		Manufacturer		
		Thickness	0.08mm* (stated)	
		Mass per unit area	0.092 kg/m <sup>2</sup> * (stated)	
	<b>Back Aluminium skin</b>	Product Name	Aluminium Back Coil*	
		Manufacturer		
		Thickness	0.45mm* (stated)	
		Mass per unit area	1.264 kg/m <sup>2</sup> * (stated)	
	<b>Back Coat</b>	Product Name	Delta Plus*	
		Manufacturer	Jadara Building Materials Co.*	
Thickness		36 µm* (stated)		
Density		2.70 g/cm <sup>3</sup> * (stated)		

**Note:** The sponsor has declared that the sample submitted for testing has been selected by Jadara Building Materials Co., for the requirement given in Section 6.7 of SASO 2752/2019 (Aluminum Composite Panel for External Cladding and Internal Finish) standard.

## 5. SPECIMEN PREPARATION PROCEDURE

The choice and design and the definition of the specimen have been made by Jadara Building Materials Co., and TBWIC testing laboratory has not been involved in the selection or design of the specimen. The results of the test apply only to the samples as received.

*Note: There are contexts where information has been provided by the sponsor and verification of information has been done through either technical datasheet or other document submission, or as indicated directly by the sponsor. For this reason, materials have been tested in an as-received condition and TBWIC bears no liability for the legitimacy of the submitted information.*

## 6. REPORT & TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

### 6.1. Reports

Name of Laboratory	Test Sponsor	Test Report No.	Test Method/Field of Application Rules
Thomas Bell-Wright International Consultants (TBWIC)	Jadara Building Materials Co.	WL072-6	BS EN 13823:2020
		WL072-7	BS EN ISO 11925-2



## 6.2. Results

Test Method	Test Parameters	No. of tests	Results	
			Continuous parameter-mean (m)	Compliance parameters
BS EN 13823:2020	$FIGRA_{0.2MJ} \leq 120 \text{ W/s}$	3	15	Compliant
	$THR_{600s} \leq 7.5 \text{ MJ}$	3	0.9	Compliant
	Lateral Flame Spread < Edge of specimen	3	< Edge of specimen	Compliant
	<b>CRITERIA for subclass "s1"</b>			
	$SMO_{GRA} \leq 30 \text{ m}^2/\text{s}^2$ <i>Note1</i>	3	0	Compliant
	$TSP_{600s} \leq 50 \text{ m}^2$ <i>Note1</i>	3	10	Compliant
	<b>CRITERIA for subclass "d0"</b>			
	Flaming droplets/Particles within 600s	3	Nil	Compliant

**Note 1:** Corrected value as per ANNEX A, Clause A.6.1.2 of BS EN 13823:2020.

Test Method	Parameter	No. of tests	Results	
			Continuous parameter-mean (m)	Compliance parameters
BS EN ISO 11925-2:2020	$F_s \leq 150\text{mm}$ within 60 seconds	12	$F_s \leq 150\text{mm}$	Compliant
	Ignition of filter paper		Nil	Compliant

## 7. CLASSIFICATION & FIELD OF APPLICATION

### 7.1. Reference of classification

This classification has been carried out in accordance with clause 8 of EN 13501-1:2018.

### 7.2. Classification

The product, 4mm thick Delta Plus Aluminium Composite Panel, in relation to its reaction to fire behavior are classified;

Fire behavior		Smoke Production		Flaming droplets
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<b>B</b>	-	s	1	,	d	0
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**Reaction to fire classification: B – s1, d0**

### 7.3. Field of application

This classification is valid for the following end use applications:

- i. Construction applications

This classification is also valid for the following product parameters:

Overall Product Thickness	No variation allowed
Product Density	No variation allowed
Product Composition	No variation allowed
Product Construction	No variation allowed
Color	No variation allowed
Joints	Results are valid for material with or without vertical & horizontal joints of ≤ 15 mm



## 8. LIMITATIONS

This document does not represent type approval or certification of the product. Similarly, the BS EN 13823 & BS EN ISO 11925-2 fire tests and related work which are a subject of this classification report have been conducted under Thomas Bell-Wright International Consultant’s ISO 17025 UKAS accreditation scheme and quality management system. However, pursuant to UKAS Technical Bulletin *BS EN 13501 & BR 135 Classification Documents (Dated 02-Feb-2022)*, classification documents are completed on an unaccredited basis because they are not themselves test procedures. As such, this document is prepared on an unaccredited basis.

This report and all records of the test to which it relates may be not be retained by TBWIC further than 5 years from the date of testing.

This test report is respectfully submitted by: Thomas Bell-Wright International Consultants

Prepared by:

Reviewed and Authorized by:

Malak Megly  
Junior Fire Testing Engineer



Suketa Tyagi  
Manager – Reaction to Fire

Report Revision Tracking		
Revision No.	Date Issued	Notes & Amendments
Rev. 00	22-May-23	This is the first issue of the report. No revisions are included.



## 9. ANNEXURE A

Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products

Class	Test method(s)	Classification criteria	Additional classification
<b>A1</b>	EN ISO 1182 <sup>a</sup> and	$\Delta T \leq 30 \text{ }^\circ\text{C}$ ; and $\Delta m \leq 50 \%$ ; and $t_f = 0$ (i.e. no sustained flaming)	-
	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 $PCS \leq 2,0 \text{ MJ/kg}^e$	-
<b>A2</b>	EN ISO 1182 <sup>a</sup> or	$\Delta T \leq 50 \text{ }^\circ\text{C}$ ; and $\Delta m \leq 50 \%$ ; and $t_f \leq 20 \text{ s}$	-
	EN ISO 1716 and	$PCS \leq 3,0 \text{ MJ/kg}^a$ and $PCS \leq 4,0 \text{ MJ/m}^2^b$ and $PCS \leq 4,0 \text{ MJ/m}^2^d$ and $PCS \leq 3,0 \text{ MJ/kg}^e$	-
	EN 13823	$FIGRA \leq 120 \text{ W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 7,5 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
<b>B</b>	EN 13823 and	$FIGRA \leq 120 \text{ W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 7,5 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> : Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	
<b>C</b>	EN 13823 and	$FIGRA \leq 250 \text{ W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 15 \text{ MJ}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> : Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	
<b>D</b>	EN 13823 and	$FIGRA \leq 750 \text{ W/s}$	Smoke production <sup>f</sup> and Flaming droplets/particles <sup>g</sup>
	EN ISO 11925-2 <sup>i</sup> : Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	
<b>E</b>	EN ISO 11925-2 <sup>i</sup> : Exposure = 15 s	$F_s \leq 150 \text{ mm}$ within 20 s	Flaming droplets/particles <sup>h</sup>
<b>F</b>	EN ISO 11925-2 <sup>i</sup> : Exposure = 15 s	$F_s > 150 \text{ mm}$ within 20 s	-

<sup>a</sup> For homogeneous products and substantial components of non-homogeneous products.

<sup>b</sup> For any external non-substantial component of non-homogeneous products.

<sup>c</sup> 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  $s_1$ , and  $d_0$ .



<sup>d</sup> For any internal non-substantial component of non-homogeneous products.

<sup>e</sup> For the product as a whole.

<sup>f</sup> In the last phase of the development of the test procedure, modifications of the smoke measurement system have been introduced, the effect of which needs further investigation. This may result in a modification of the limit values and/or parameters for the evaluation of the smoke production.

**s1** = SMOGRA  $\leq 30\text{m}^2/\text{s}^2$  and TSP<sub>600s</sub>  $\leq 50\text{m}^2$  ; **s2** = SMOGRA  $\leq 180\text{m}^2/\text{s}^2$  and TSP<sub>600s</sub>  $\leq 200\text{m}^2$ ; **s3** = not s1 or s2

<sup>g</sup> **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.

Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

<sup>h</sup> Pass = no ignition of the paper (no classification);

Fail = ignition of the paper (d2 classification).

<sup>l</sup> Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.

---- End of Classification Report ----