

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

## Test Sponsor:

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## Test Material/Assembly:

Easy Wall Panel System



**THOMAS BELL-WRIGHT  
INTERNATIONAL CONSULTANTS**

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Classification Report Reference No.: TL168-4

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DUBAI

ABU DHABI

DOHA



## Accreditation

ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories with:

United Kingdom Accreditation Service (UKAS) - Testing Laboratory: **4439**  
[www.ukas.com](http://www.ukas.com)



## Memberships

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

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

Member of International Trade Council

[www.thetradecouncil.com](http://www.thetradecouncil.com)

Member of Association for Specialist Fire Protection

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

Member of Centre for Window and Cladding Technology

[www.cwct.co.uk](http://www.cwct.co.uk)



The work which is the subject of this report falls under the accreditations of **ISO 17025 UKAS**.



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## **1. INTRODUCTION**

This classification report defines the classification assigned to 'Easy Wall panel system' 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/MANUFACTURER**

Name: Technical Supplies and Services Co. LLC  
Address: Dubai Investment Park – Phase 1  
P.O. Box 77031  
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Website: [www.tsscgroup.com](http://www.tsscgroup.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 +971 (0)4 821 5777  
Website: [www.bell-wright.com](http://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.*

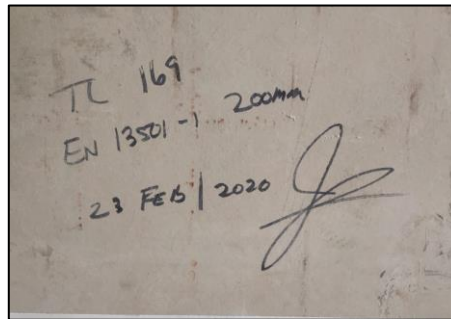
<b>Product Description</b>		Easy Wall Panel System		
<b>Manufacturer</b>		Technical Supplies & Services Co. LLC, Dubai		
<b>Thickness</b>		75mm (Measured by TBWIC)	200mm (Measured by TBWIC)	
<b>Area Density</b>		49 kg/m <sup>2</sup> (Measured by TBWIC)	126 kg/m <sup>2</sup> (Measured by TBWIC)	
<b>Volume Density</b>		653.3 kg/m <sup>3</sup> (Measured by TBWIC)	632.5 kg/m <sup>3</sup> (Measured by TBWIC)	
<b>Product Details</b>	<b>Layer 1</b>	Product Description	Cement board facing* (stated)	
		Product Reference	Shera* (stated)	
		Material	Fibre cement board* (stated)	
		Manufacturer	Thai Olympic Fibre-cement Co. Ltd.* (stated)	
		Thickness	4.5mm* (stated)	
		Area Density	5.62 kg/m <sup>2</sup> * (stated)	
		Volume Density	1320 kg/m <sup>3</sup> * (Measured by TBWIC)	
	<b>Layer 2</b>	Product Description	Lightweight concrete core* (stated)	
		Product Reference	Easy Wall Panel* (stated)	
		Material	Concrete mixture with Expanded Polystyrene beads* (stated)	
		Manufacturer	TSSC Co. LLC, DIP* (stated)	
		Thickness	75mm Panel Assembly	200mm Panel Assembly
			66mm* (stated)	191mm* (stated)
		Area Density	36.3 kg/m <sup>2</sup> * (stated)	105 kg/m <sup>2</sup> * (stated)
	Volume Density	500 kg/m <sup>3</sup> * (Measured by TBWIC)		
	<b>Layer 3</b>	Product Description	Cement board facing* (stated)	
		Product Reference	Shera* (stated)	
		Material	Fibre cement board* (stated)	
		Manufacturer	Thai Olympic Fibre-cement Co. Ltd.* (stated)	
		Thickness	4.5mm* (stated)	
		Area Density	5.62 kg/m <sup>2</sup> * (stated)	
Volume Density		1320 kg/m <sup>3</sup> * (Measured by TBWIC)		
<b>Backing Board Details</b>	Material	Calcium Silicate Board (Verified by TBWIC)		
	Density	885 kg/m <sup>3</sup> (Measured by TBWIC)		
	Thickness	9 mm (Measured by TBWIC)		
	Classification	A2-s1, d0 as per BS EN 13501-1:2018 (Verified by TBWIC)		



<b>Type of Joints</b>	<ol style="list-style-type: none"><li>1. Horizontal Joints: Sealed butt joint at 500mm from the specimen bottom to the center of joint, measured when the wings were mounted.</li><li>2. Vertical Joints: Sealed butt joints at 200mm &amp; 800mm from the corner line to the center of the joint, measured when the wings were mounted.</li></ol>
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## 5. SPECIMEN VERIFICATION

TBWIC testing laboratory has not been involved in the selection or design of the specimen. However, the panels were selected, marked, and signed by Mr. John Muse from TBWIC Certification Division (Certification Body) on 23-Feb-20 as shown below. The results apply to the sample 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)	Technical Supplies and Services Co. LLC	TL168-1	BS EN 13823:2010 +A1:2014
		TL168-2	BS EN 13823:2010 +A1:2014
		TL168-3	BS EN ISO 1716:2018

### 6.2. Results

Test Method	TEST PARAMETERS		No. of tests	TEST RESULTS		
				Continuous Parameter-Mean (m)	Compliance Parameters	
BS EN ISO 1716:2018	PCS ≤ 3.0 MJ/kg (for Substantial component)	Facing	3	0	Compliant	
		Core	3	0	Compliant	
		Facing	3	0	Compliant	
<b>75mm Panel Assembly (TL168-1)</b>						
Test Method	TEST PARAMETERS		No. of tests	TEST RESULTS		
				Continuous Parameter-Mean (m)	Compliance Parameters	
BS EN 13823:2010 +A1:2014	FIGRA <sub>0.2</sub> MJ ≤ 120 W/S		3	0	Compliant	
	THR <sub>600s</sub> ≤ 7.5 MJ		3	0.3	Compliant	
	Lateral Flame Spread < Edge of Specimen		3	< Edge of Specimen	Compliant	
	<b>CRITERIA for subclass "s1"</b>					
	SMOGR <sub>A</sub> ≤ 30m <sup>2</sup> /s <sup>2</sup>		3	0	Compliant	
	TSP <sub>600s</sub> ≤ 50m <sup>2</sup>		3	10.6	Compliant	
	<b>CRITERIA for subclass "d0"</b>					
	Flaming droplets/particles within 600s		3	Nil	Compliant	
<b>200mm Panel Assembly (TL168-2)</b>						
Test Method	TEST PARAMETERS		No. of tests	TEST RESULTS		
				Continuous Parameter-Mean (m)	Compliance Parameters	
BS EN 13823:2010 +A1:2014	FIGRA <sub>0.2</sub> MJ ≤ 120 W/S		3	0	Compliant	
	THR <sub>600s</sub> ≤ 7.5 MJ		3	0.1	Compliant	
	Lateral Flame Spread < Edge of Specimen		3	< Edge of Specimen	Compliant	
	<b>CRITERIA for subclass "s1"</b>					
	SMOGR <sub>A</sub> ≤ 30m <sup>2</sup> /s <sup>2</sup>		3	0	Compliant	
	TSP <sub>600s</sub> ≤ 50m <sup>2</sup>		3	9.8	Compliant	
	<b>CRITERIA for subclass "d0"</b>					
	Flaming droplets/particles within 600s		3	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, 75mm to 200mm thick 'Easy Wall Panel System' in relation to its reaction to fire behavior are classified;

Fire behavior		Smoke production				Flaming droplets	
A2	-	s	1	,	d	0	

### Reaction to fire classification: A2 – s1, d0

Remark: The classes with their corresponding fire performance are given in annex A.

### 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	Variation allowed within tested thickness parameters
Product density	No variation allowed
Product composition	No variation allowed
Product construction	No variation allowed
Colour	No variation allowed
Fixing method	No variation allowed
Joints	Results valid for materials with or without horizontal and vertical joints





## 8. LIMITATIONS

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

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:

Sujana Haridas  
Fire Testing Engineer

Reviewed and Approved by:

Suketa Tyagi  
Reaction to Fire Manager





## 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>i</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 ----