



Date: Oct. 8, 2017

CERTIFICATE OF COMPLIANCE

This certificate of compliance validates the following			
TEST REPORT NUMBER <small>'Assessment Reports' are not acceptable</small>	RC108-1 17/14991-1530 M1 Part 2 103140252MID-001	CERTIFICATE NUMBER	TBW0300221 TBW0300220
DATE OF ISSUE	RC108-1: 19-Jul-2017 17/14991-1530 M1 Part 2: 19-Sep-2017 103140252MID-001: 9-Aug-2017	DATE OF ISSUE	TBW0300221: 26-Sep-2017 TBW0300220: 25-Sep-2017
DATE OF EXPIRY	N/A	DATE OF EXPIRY	TBW0300221: 25-Sep-2020 TBW0300220: 24-Sep-2020
Manufacturer details			
NAME OF FACTORY / MANUFACTURER	Faveton Terracota S.L.	NAME OF THE BRAND	Faveton "CERAM" 20 mm thick terracotta tiles
FACTORY ADDRESS / REGION <small>(STREET / TOWN / CITY / COUNTRY)</small>	Crta. Herrera de los Navarros Km 1.5, 50450 MUEL-Zaragoza, Spain	MODEL / NO	"FAVETON System SAC-D" Ventilated Façade System (System Designation: M012N10-20) Drawing Reference: FVC001 to FVC006
WEBSITE	www.faveton.com	LOGO ON THE PRODUCT	FAVETON TERRACOTA
TEL	+34 976 140 311	EMAIL	info@faveton.com





Product Details From Test Report		Reference Test Report page NO																
DESCRIPTION OF THE PRODUCT (TECHNICAL DETAILS FROM TEST REPORT, SUCH AS ACTUAL FIRE RATINGS/DIMENSIONS/THICKNESS/SENSITIVITYETC)	<p>Ventilated Façade System</p> <p>"FAVETON System SAC-D" Ventilated Façade System is composed of "CERAM" 20 mm thick tiles with tongue and groove edges which are slid into the tile holder profiles where strips of gaskets are fitted to maintain a gap between the tiles and the aluminium profile. The tile holders were fixed to the 2 mm thick vertical runners which were fixed to the exterior wall using 3 mm thick aluminium angle wall brackets. Exterior insulation of 50 mm thick mineral wool was fixed on the cavity between the wall and the tiles while an airgap of 30 mm was maintained. The tiles had 6 × 13 mm hollow section spaced at 17 mm centres. Details of the tiles are stated in Table 1 below.</p> <p>Table 1. "CERAM 20" extruded hollow core terracotta tiles</p> <table border="1"> <thead> <tr> <th>Product Reference/ Model No.</th> <th>CERAM 20</th> </tr> </thead> <tbody> <tr> <td>Manufacturer</td> <td>Faveton Terracota, S.L.</td> </tr> <tr> <td>Dry Weight</td> <td>32 ± 1 % kg/m²</td> </tr> <tr> <td>Thickness</td> <td>20 mm ± 10%</td> </tr> <tr> <td>Maximum Length</td> <td>988 ± 1.0 mm</td> </tr> <tr> <td>Maximum Width</td> <td>500 ± 1.0 mm</td> </tr> <tr> <td>Minimum Length</td> <td>378 ± 1.0 mm</td> </tr> <tr> <td>Minimum Width</td> <td>300 ± 1.0 mm</td> </tr> </tbody> </table>	Product Reference/ Model No.	CERAM 20	Manufacturer	Faveton Terracota, S.L.	Dry Weight	32 ± 1 % kg/m ²	Thickness	20 mm ± 10%	Maximum Length	988 ± 1.0 mm	Maximum Width	500 ± 1.0 mm	Minimum Length	378 ± 1.0 mm	Minimum Width	300 ± 1.0 mm	RC108-1: Page 4 to 5 17/14991-1530 M1 Part 2: Page 1 103140252MID-001: Page 3
	Product Reference/ Model No.	CERAM 20																
Manufacturer	Faveton Terracota, S.L.																	
Dry Weight	32 ± 1 % kg/m ²																	
Thickness	20 mm ± 10%																	
Maximum Length	988 ± 1.0 mm																	
Maximum Width	500 ± 1.0 mm																	
Minimum Length	378 ± 1.0 mm																	
Minimum Width	300 ± 1.0 mm																	
TEST STANDARD (SUCH AS ASTM/BS EN/ DNETC)	<p>ASTM D1929-16 Standard Test Method for Determining Ignition Temperature of Plastics</p> <p>UNE-EN 13501-1:2007+A1:2010 Fire Classification of construction products and building elements-Part 1: Classification using data from reaction to fire tests TM</p> <p>NFPA 285; Standard Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Loadbearing Wall Assemblies Containing Combustible Components, 2012 Edition.</p>	103140252MID-001: Page 3 17/14991-1530 M1 Part 2: Page 2 RC108-1: Page 4																
TEST DESCRIPTION	<p>ASTM D1929-16</p> <p>This fire test response test method covers a laboratory determination of the flash ignition temperature and spontaneous ignition temperature of plastics using hot-air furnace.</p> <p>Self-ignition temperature is the minimum temperature at which the self-heating properties of the specimen lead to ignition or ignition occurs of itself, under test conditions, in the absence of any additional flame ignition source. Flash ignition temperature is the minimum temperature at which, under specified test conditions, sufficient flammable gases are emitted to ignite momentarily upon application of a small external pilot flame. These</p>	103140252MID-001: Page 3 17/14991-1530 M1 Part 2: Page 2																



	<p>temperatures were determined by observing the specimen at a known temperature utilizing a self-ignition furnace. (ICN:61256)</p> <p>UNE-EN 13501-1:2007+A1:2010 Classification in terms of the behavior to fire of construction products and building elements. Part1. Classification made from the data gathered during fire reaction tests.</p> <p>NFPA 285-2012 Edition The 5500 x 4550mm (h x w) intermediate scale multi-story assembly (ISMA) test wall was constructed of a base wall consisting of a galvanized steel support frame and Type X gypsum board onto which aluminium runners of 2 mm nominal thickness were fixed to the supporting construction of the base wall using 3 mm thick aluminium brackets. The tiles were then fixed onto the framing system.</p> <p>The test assembly was installed on a moveable test frame constructed of 150 x 150mm steel l-beams with 3 Nos. of 100 x 100mm steel angles welded horizontally at locations specified by the standard.</p> <p>The assembly was secured onto the laboratory's intermediate scale multi-story test apparatus (ISMA) and the gaps were filled with ceramic fiber blanket (supplied by Unifrax) with a density of 128 kg/m3.</p> <p>The specimen was fitted with Nos. 54 instruments of Type-K thermocouples which were distributed as per the diagram in Appendix 1.</p> <p>A 100 channel Agilent 34970A data logger was used to record the output of the thermocouples on 15 second intervals.</p> <p>The window burner was centered on the vertical centerline of the window, 9 inches below the top of the opening, and with the longitudinal centerline of the burner at 3.5 inches from the plane of the exterior wall, consistent with the standard and the calibration of the test apparatus.</p> <p>The assembly was tested based on the values obtained during the calibration as per the NFPA 285 standard.</p> <p>The burn room thermocouples were placed at 6 inches below the first story test room ceiling and distributed according to NFPA 285.</p>	<p>RC108-1: Page 4 to 7</p>										
<p>SPECIFICATION OF TEST SPECIMEN</p>	<p>1. Exterior Cladding Material</p> <p>"CERAM" 20 mm thick tiles with tongue and groove edges that slid into the tile holder profiles where strips of gaskets were fitted to maintain a gap between the tiles and the aluminium profile. The tiles had 6 x 13 mm hollow section spaced at 17 mm centres. Details of the tiles are stated in Table 1 below.</p> <p>Table 1. "CERAM 20" extruded hollow core terracotta tiles</p> <table border="1" data-bbox="662 1668 1332 1962"> <tr> <td>Product Reference/ Model No.</td> <td>CERAM 20</td> </tr> <tr> <td>Manufacturer</td> <td>Faveton Terracota, S.L.</td> </tr> <tr> <td>Dry Weight</td> <td>32 ±1 % kg/m²</td> </tr> <tr> <td>Thickness</td> <td>20 mm ± 10%</td> </tr> <tr> <td>Maximum Length</td> <td>988 ± 1.0 mm</td> </tr> </table>	Product Reference/ Model No.	CERAM 20	Manufacturer	Faveton Terracota, S.L.	Dry Weight	32 ±1 % kg/m ²	Thickness	20 mm ± 10%	Maximum Length	988 ± 1.0 mm	<p>RC108-1: Page 15 to 32</p> <p>17/14991-1530 M1 Part 2: Page 1</p> <p>103140252MID-001: Page 3</p>
Product Reference/ Model No.	CERAM 20											
Manufacturer	Faveton Terracota, S.L.											
Dry Weight	32 ±1 % kg/m ²											
Thickness	20 mm ± 10%											
Maximum Length	988 ± 1.0 mm											



	Maximum Width	500 ± 1.0 mm
	Minimum Length	378 ± 1.0 mm
	Minimum Width	300 ± 1.0 mm
2. Tile Fixing Profiles and Components		
2a	Horizontal runner and tile holder- Intermediate Profile Material: Aluminium Alloy 6063-T5 Nominal Thickness: 3 mm Reference: X61040 Fixing: Stainless steel screw S-AD01 S 5.5 × 25 mm (by Hilti)	
2b	Horizontal runner and tile holder- Starter Profile Material: Aluminium Alloy 6063-T5 Nominal Thickness: 3 mm Reference: X61041 Fixing: Stainless steel screw S-AD01 S 5.5 × 25 mm (by Hilti)	
2c	Horizontal runner and tile holder- Coping Profile Material: Aluminium Alloy 6063-T5 Nominal Thickness: 3 mm Reference: X61042 Fixing: Stainless steel screw S-AD01 S 5.5 × 25 mm (by Hilti)	
2d	Gasket Material: EPDM based rubber Nominal Thickness: 6 mm Reference: EP-70 12FI	





3. Substructure Components

3a. Wall Brackets

Aluminium angle brackets, 60 × 90 × 3 mm thick, 120 and 60 mm long (Aluminium Alloy 6063-T6, Ref: X41390) fixed to the base wall between 411 mm to 1062 mm horizontally and 710 mm to 900 mm vertically. The brackets were fixed to the base wall using 2 nos. of Ø5.5 × 35 mm JT3-2H-Plus-5.5×35 screw (EJOT® SUPER-SAPHIR self-drilling screw JT3-2H-Plus-5.5).

3b. Vertical Runners

Aluminium Alloy 6063-T6, 100 × 60 × 2.0 mm thick "T" profile fixed to the wall brackets using Ø5.5 × 25 mm stainless steel screw S-AD01 S 5.5 × 25 by HILTI. The vertical runners are spaced according to the width of the tiles.

4. Exterior Insulation

4a. Mineral Wool

Single layer of 50 mm thick mineral wool fixed to the exterior gypsum board using stainless steel insulation anchor. There are nominal of 1 to 2 fixings per slab at a maximum slab dimension of 1350 × 600 mm (width × length)

Manufacturer: Rockwool Peninsular, S.A.U.

Minimum Density: 63 kg/m³

Reference: Ventirock DUO/50

4b. Insulation Fixing

Material: Stainless steel anchor and washer

Reference: DMH-8 × 80-E & DMT-80-V

Dimension: Ø8 mm × 80 mm

Manufacturer: EJOT®

5. Base Wall

5a. Interior & Exterior Gypsum Board

1220 × 2400 × 15.9 mm (width × height × thickness) "Type X" gypsum board fixed on 1.2 mm thick galvanized steel studs and tracks. The boards are fixed to the studs and tracks using Ø3.5 mm × 35 mm zinc coated drywall screws at a nominal spacing of 300 mm. The board joints were covered with gypsum board jointing tape and jointing compound. Screw heads were covered with jointing compound.

5b. Steel Studs and Tracks


1.2 mm thick galvanized steel (ASTM A653/A653M- Commercial Grade) studs (93 × 32 × 34 × 9, web × flange × flange × return) and tracks (95 × 32 × 32, web × flange × flange) welded directly to the base frame.

6. Window Flashing

Pre-bent 3 mm thick galvanized steel (ASTM A653/A653M- Commercial Grade), 230 × 53 mm. The formed sheets are cut to required length to cover the inner perimeter of the window opening, butt jointed and fixed to the base wall using of Ø6.3 × 40 mm stainless steel self-tapping screws. The window flashing overlaps the exterior face of the wall by 50 mm.







<p>TEST RESULT (SUCH AS PASSED CRITERIA___/ COMPLIED TO___/ DURATION___/OBSERVATION___/ETC)</p>	<p>1. PASS FAVETON System SAC-D Non-load-bearing façade system which has successfully met the requirements for fire propagation characteristics when evaluated against NFPA 285-2012 Edition Test report reference: RC108-1</p> <p>2. PASS Self-Ignition Temperature: >760°C Flash Ignition Temperature: >760°C Test report reference: 103140252MID-001 Test method: ASTM D1929-16</p> <p>3. PASS Class A1 Test report reference: 17/14991-1530 M1 Part 2 Classification method: EN 13501-1:2007+A1:2010</p>	<p>RC108-1: Page 9</p> <p>103140252MID-001: Page 4</p> <p>17/14991-1530 M1 Part 2: Page 3</p>
<p>PRODUCT APPLICATION GUIDELINE (END USE) (CLEARLY STATE THE END USE WITH SPECIFIC APPLICATION, SUCH AS EXACT FIRE RATING/TO BE INSTALLED IN___/TO BE INSTALLED AT___/TO BE CONNECTED WITH___/TO BE INSTALLED WITH___ ETC ALONG WITH ANY WARNINGS SUCH AS NOT TO BE USED IN___/NOT TO BE INSTALLED AT___/ NOT TO BE INSTALLED WITH___ ETC.</p>	<p>a. To be installed as non-fire resistance rated and non-loadbearing exterior wall coverings for super highrise buildings, highrise building, midrise buildings, low rise buildings, malls, theme parks, schools, hospitals, assembly, warehouse and industrial.</p> <p>b. To be installed by manufacturer's approved installers only.</p> <p>c. To be used as a non-load-bearing exterior wall cladding on buildings.</p> <p>d. This COC is based on fire performance of the product/system only.4</p> <p>e. The design of the certified non-load-bearing exterior wall cladding assembly including the exact specification of the components, method of fixing and condition of such component, which was subjected to the fire test, shall be duplicated when installed on the site. The design and components of the non-load-bearing exterior wall cladding assembly are not intended to be substituted, eliminated or interchanged unless recognized and approved by the certification or listing.</p> <p>f. The certification covers the non-load-bearing exterior wall cladding system in its entirety. Individual components that comprise the wall cladding system (on their own) are not covered under this certification.</p> <p>g. The actual field installations of the certified non-load-bearing exterior wall cladding system shall not limit the use of the methods and materials employed to seal the gap between the edge of the preceding floor slab and the interior surface of the test specimen during the test, provided approved sealing methods and materials are used in the field.</p> <p>h. The actual field installations of the non-load-bearing exterior wall cladding system covered under this certification shall include the fire breaks installed vertically and horizontally at specific locations as detailed in the test report and classification report.</p> <p>i. It is recommended that exterior cladding systems should be inspected by a qualified third party during installation to verify compliance with this certification.</p>	



Laboratory and Certification Body Details


	CERTIFICATION BODY	TESTING FACILITY (Test Report Ref: RC108-1)
NAME OF CERTIFICATION BODY & TESTING FACILITY	Thomas Bell-Wright International Consultants	Thomas Bell-Wright International Consultants
CERTIFICATION BODY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)	46 th & 47 th Sts. Jebel Ali Ind. Area 1 PO Box 26385, Dubai, UAE	46 th & 47 th Sts. Jebel Ali Ind. Area 1 PO Box 26385, Dubai, UAE
WEBSITE	www.bell-wright.com	www.bell-wright.com
TEL	+ 971 4 821 5777	+ 971 4 821 5777
EMAIL	certification@bell-wright.com	fire@bell-wright.com
ACCREDITED BY (ACCREDITATION BODY AND WEBSITE)	UKAS www.ukas.com	IAS www.iasonline.com
AS PER (STANDARD TO WHICH ACCREDITED)	ISO/IEC 17065:2012	ISO/IEC 17025:2005
VALIDITY (EXPIRY DATE OF ACCREDITATION)	No expiry subject to yearly audits.	No expiry subject to yearly audits.
REFERENCE NUMBER: (ACCREDITATION NUMBER)	6762	TL-626
LISTING WEBSITE	www.tbwcert.com	www.tbwtrs.com
CERTIFICATION MARK / LOGO	 THOMAS BELL-WRIGHT	 THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS



TM



Laboratory and Certification Body Details


CERTIFICATION BODY		TESTING FACILITY
NAME OF CERTIFICATION BODY & TESTING FACILITY	Thomas Bell-Wright International Consultants	APPLUS Laboratories
CERTIFICATION BODY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)	46 th & 47 th Sts. Jebel Ali Ind. Area 1 PO Box 26385, Dubai, UAE	Campus de la U.A.B., Ronda de la Font del Carme, s/n; 08193 Bellaterra (Barcelona) Spain
WEBSITE	www.bell-wright.com	www.appluslaboratories.com
TEL	+ 971 4 821 5777	+34 93 567 20 00
EMAIL	certification@bell-wright.com	info@appluslaboratories.com
ACCREDITED BY (ACCREDITATION BODY AND WEBSITE)	UKAS www.ukas.com	ENAC www.enac.es
AS PER (STANDARD TO WHICH ACCREDITED)	ISO/IEC 17065:2012	ISO/IEC 17025:2005
VALIDITY (EXPIRY DATE OF ACCREDITATION)	No expiry subject to yearly audits.	No expiry subject to yearly audits.
REFERENCE NUMBER: (ACCREDITATION NUMBER)	6762	9/LE895
LISTING WEBSITE	www.tbwcert.com	www.appluslaboratories.com ruben.martinez@applus.com
CERTIFICATION MARK / LOGO	 THOMAS BELL-WRIGHT	



TM



Laboratory and Certification Body Details

CERTIFICATION BODY		TESTING FACILITY
		(Test Report Ref: 103140252MID-001)
NAME OF CERTIFICATION BODY & TESTING FACILITY	Thomas Bell-Wright International Consultants	INTERTEK TESTING SERVICES NA INC.
CERTIFICATION BODY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)	46 th & 47 th Sts. Jebel Ali Ind. Area 1 PO Box 26385, Dubai, UAE	8431 MURPHY DRIVE MIDDLETON, WISCONSIN 53562
WEBSITE	www.bell-wright.com	www.intertek.com
TEL	+ 971 4 821 5777	(608) 824-7444
EMAIL	certification@bell-wright.com	katrina.francis@intertek.com
ACCREDITED BY (ACCREDITATION BODY AND WEBSITE)	UKAS www.ukas.com	IAS www.iasonline.org
AS PER (STANDARD TO WHICH ACCREDITED)	ISO/IEC 17065:2012	ISO/IEC 17025:2005
VALIDITY (EXPIRY DATE OF ACCREDITATION)	No expiry subject to yearly audits.	No expiry subject to yearly audits.
REFERENCE NUMBER: (ACCREDITATION NUMBER)	6762	TL-271
LISTING WEBSITE	www.tbwcert.com	www.Intertek.com shamima.alam@intertek.com
CERTIFICATION MARK / LOGO	 THOMAS BELL-WRIGHT	



TM



(ENDORSEMENT) TO BE SIGNED BY MANUFACTURER			
NAME OF MANUFACTURER'S SIGNATORY	Tamim Ghadban	SIGNATURE	
EMAIL / TEL	tamim@faveton.com/ (+34) 976 140 311	FACTORY OFFICIAL SEAL	
NOTES: I Undertake that all data and information provided are genuine and accurate			

(ENDORSEMENT) TO BE SIGNED BY CERTIFICATION BODY			
NAME OF CERTIFICATION BODY SIGNATORY	Thomas F. Bell-Wright	SIGNATURE	
EMAIL / TEL	tomb-w@bell-wright.com/ +971 50 645 3744	CERTIFICATION BODY OFFICIAL SEAL	
NOTES: I Undertake that all data and information provided are genuine and accurate			

ATTACHMENTS:

- COPY OF 'CERTIFICATE OF COMPLIANCE' ISSUED BY CERTIFICATION BODY (OLD OR NEW)