

## Specification Substantiation Sheet

System: Direct Fix EWI System

### SPS Envirowall System :-

External Thermal Insulated Composite System (ETICS) using Mineral Wool Insulation & Envirosil silicone render Finish.

The test Covers the following System Accreditation

- BBA 05/4206 - Product Sheet 1
- BBA 17/5447 - Product Sheet3 & 4
- KIWA BDA 21-224
- KIWA BDA 18-079

**Fire Classification report number:** EUI-21-000529

**Reaction to Fire Classification - A2-s1-d0**

Test Standard: BS 13501-1:2018

Date of test : 13/04/2022

Validity Period: Valid until change of regulatory standards or fundamental materials formulation or system change.

Test Authority – Efectis UK/Ireland

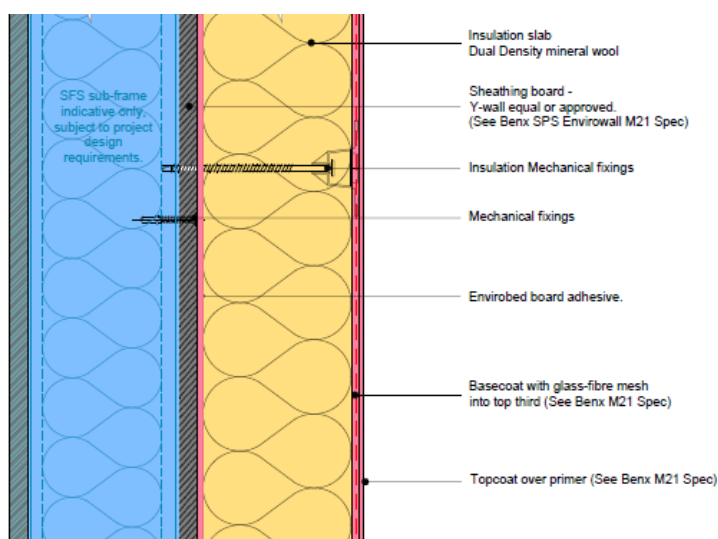
UKAS NR : 10169

Test Site Location – Efectis France

COFFRAC No.1-1762 & 1-2470

- BS EN 13501 classification report is the summary of the tests stated below:-
- BS EN ISO 1182 - Non-combustibility test.
- BS EN ISO 1716 - Heat of combustion test.
- BS EN 13823 Single - Burning item test.

### Section Through System



### Summary of System Tested

Name of Laboratory	Name of sponsor	Report ref. no	Test method and date field of application rules and date
EFFECTIS UK/Ireland	Benx Ltd.	EUI-21-SBI-000529	BS EN 13823 : 2020
EFFECTIS UK/Ireland	Benx Ltd.	EUI-21-HC-000529-A EUI-21-HC-000529-B	BS EN ISO 1716 : 2018
EFFECTIS FRANCE	Benx Ltd.	EFR-19-HC-002305 A EFR-19-HC-002305 C EFR-19-HC-002305 D EFR-19-HC-002305 E	BS EN ISO 1716 : 2018

Description	Product	Thickness (mm)	Mass Per Unit Area (kg/m <sup>2</sup> )	Layer Classification
Bedding Mortar	EnviroBed	5	8	Substantial
MW Insulation	Rockwool Stone Wool	110	12.1	Substantial
Base Coat	EnviroRend	5	8	Substantial
1st mesh cloth	Premier mesh	0.52	0.16	Non-Substantial
Primer	Silicone Primer	0.2	0.348	Non-Substantial
Topcoat	Silicone Render Finish	1.5	2.7	Substantial

### Tested Specimen

- Envirosil Silicone Render & Primer layers tinted to in **RAL: 5013**, highest level of in-organic pigment with product range.
- Tested over D-s2,d0 9mm OSB Board

### Technical Notes – Field of Application

- Valid without air gap / cavity between the panel and the substrate
- According to the standard BS EN 13238:2012, the classification is valid for the following end use applications:
- Valid bonded, bonded and mechanically fixed or only mechanically fixed to any end use wood-based substrates with a density at least 450 kg/m<sup>3</sup> and, also any end use substrate of classes A1 and A2-s1,d0.
- Valid for mineral wool with a density ≤ 140kg/m<sup>3</sup> Plus 10%
- Valid for mineral wool with a density
- The silicone topcoat tested was RAL5013 (Blue) and contains the highest level of pigment organic content. This classification covers all colours withing the Envirosil standard color range as these have a lower organic content.

## General Specification & Clarification Notes

The above system samples have been tested, designed, and constructed in accordance with EAD 040083 00 0404 (which supersedes ETAG 004)

Single Burn item test (SBI - EN 13823) configuration does not require any beads, fixings, trims, movement beads, etc to be tested as part of the physical tested sample for EWI (ETICS) systems as stated. This is in accordance with European Assessment Directive (EAD 040083 00 0404)

The above items are considered by the standard to be non-substantial and or non-continuous items within the system and therefore not needed to be tested to ISO 1182:2020 for Reaction to fire tests for products non-combustibility tests.

In addition, within the EAD & in-line with BS EN 13823 (SBI test), when the use of plastic / nylon mechanical fixing has been included within the tested system, metal mechanical fixings are also valid for use. Mechanical Fixings used in the test are in line with Benx SPS Envirowall KIWA or BBA Certificate and manufactured and designed in accordance with ETAG 004.

Suitable approved sheathing boards, including Y wall and Multipurpose may be able to achieve a timed fire rating of up to 120 minutes, subject structure build up outside of this classification report (BS EN 1364-1: 1999). Refer to Benx Technical Services for further support.



EUI-21-000529

CLASSIFICATION REPORT

Reaction to fire classification	A2-s1,d0
---------------------------------	----------

### 5.3. FIELD OF APPLICATION

According to the EAD 040083-00-0404, this classification is valid for the following product parameters:

- Valid for a mineral wool insulation with a density  $\leq 140 \text{ kg/m}^3 \pm 10\%$  and a thickness  $\leq 160 \text{ mm}$
  - Valid for adhesive with organic content per unit area  $\leq 1.1\%$
  - Valid for a mineral base coat with an organic content per unit area  $\leq 3.22\%$  at a maximal rate of  $8 \text{ kg/m}^2$
  - Valid for all reinforcing mesh with a GCV  $\leq 5.75 \text{ MJ/kg}$  embedded inside the Base coat in such a way that placed between two substantial layers
  - Valid for a primer coat with an organic content  $\leq 13.6 \text{ ml/kg}$  at a maximal rate of  $0.348 \text{ kg/m}^2$
  - Valid for an organic finishing coat with an organic content  $\leq 13.6 \text{ ml/kg}$  at a rate  $\leq 2.7 \text{ kg/m}^2$  and a grain size  $\leq 1.5 \text{ mm}$
- Valid without air gap / cavity between the panel and the substrate  
 Valid for colours with equal or lower organic content of the tested colour  
 Valid for all product sizes.  
 Valid for fire on Silicone render finish only

According to the standard BS EN 13238:2012, the classification is valid for the following end use applications:

- Valid bonded, bonded and mechanically fixed or only mechanically fixed to any end use wood based substrates with a density at least  $450 \text{ kg/m}^3$  and also any end use substrate of classes A1 and A2-s1,d0.

### Standard & Reference Documents

- The above System classification should be read and designed in relation to BRE BR135 & BS 8414-1:2020 & 8414-2:2020 steel frame.
- BS 8414-1:2020 (Fire performance of external cladding systems - Test method for non-loadbearing external cladding systems fixed to, and supported by, a masonry substrate)
- BS 8414-2:2020 Fire performance of external cladding systems - Test method for non-loadbearing external cladding systems fixed to, and supported by, a structural steel frame.
- BRE BR 135 - Fire performance of external thermal insulation for walls of multi-storey buildings
- EAD 040083 00 0404 - External Thermal Insulation Composite Systems (ETICS) with Renderings
- EAD 040287-00-0404 - ETICS with Discontinuous claddings as external skin
- BS EN 13501-1:2018 Fire classification of construction products and building elements - Classification using data from reaction to fire tests.
- ETA004 Guidance for European Technical Approval of External Thermal Insulation Composite Systems with render, including fixings and association including inbuilt components.

*ISO Ref: 5321*