TEST REPORT

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Project Title:	Accelerated Weathering Testing of Ibstock Brick Ltd.'s Mechslip Brick Slip System
Client:	Ibstock Brick Ltd Leicester Road Ibstock Leicester Leicestershire LE67 6HS
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CONTENTS

		Page
1	**INTRODUCTION**	**3**
2	**SAMPLE**	**3**
3	**TEST METHOD**	**3**
3.1	**Hygrothermal Testing in Accordance with Clause 5.4.6 ETAG 034:2012**	**3**
3.1.1	***Weathering Cycles***	**3**
3.1.2	***Conditioning to ETAG 034***	**3**
3.1.3	***Heat Rain - 80 Cycles***	**3**
3.1.4	***Heat Cold – 5 Cycles***	**4**
3.2	**Hygrothermal Testing in Accordance with Clause 5.7.2.2 ETAG 017:2005**	**4**
4	**RESULTS**	**4**
PLATES		**6**

1 INTRODUCTION

Lucideon were contracted to assess the performance of Ibstock Brick Ltd.'s Mechslip brick slip cladding system in accordance with ETAG 034:2012 Guideline for European Technical Approval of kits for external wall claddings and ETAG 017:2005 Guideline for European Technical Approval of Veture Kits - Prefabricated Units for External Wall Insulation.

2 SAMPLE

Ibstock Brick Ltd supplied 1 No. panel of nominal dimensions 750 mm x 670 mm (W X H) with their Mechslip brick slip system pre-installed.

The sample consisted of clay brick slips with a slotted detailing on their rear. These were slotted onto horizontal aluminium rails at nominally 75 mm centres. The horizontal rails were themselves fixed onto vertical aluminium T rails set at 570 mm centres. The brick slips were pointed in.

A photograph of the sample prior to testing can be seen in the Plates Section.

3 TEST METHOD

3.1 Hygrothermal Testing in Accordance with Clause 5.4.6 of ETAG 034:2012

The panel received from Ibstock Brick Ltd was positioned into one of Lucideon's Hygrothermal chambers.

Testing was carried out in accordance with the method described for Hygrothermal Performance in ETAG 034:2012 Guideline for European Technical Approval of kits for external wall claddings.

The testing involved subjecting the system to repeated heat-rain cycles followed by repeated heat-cold cycles at controlled humidity conditions designed to simulate naturally occurring conditions:

3.1.1 Weathering Cycles

The panel was subjected to cyclic heat-rain (ETAG 034) conditions followed by heat cold cycling according to the following programme.

3.1.2 Conditioning to ETAG 034

The panel was subjected to cyclic heat-rain conditions followed by heat-cold cycles according to the following programme.

3.1.3 Heat Rain - 80 Cycles

Heating to 70°C rising over 1 hour and maintaining at 70°C ± 5 at 10-30% RH for a further 2 hours.

Followed by spraying with water (water temp 15°C ± 5) at 1 l/m^2/min for 1 hour.

Draining for 2 hours.

On completion of the heat rain cycles the wall was conditioned for 48 hours at a temperature between 10 and 25°C with a minimum RH of 50%.

3.1.4 Heat Cold – 5 Cycles

Exposure to 50°C ± 5 with a rise over 1 hour and maximum 30% RH, and hold for 7 hours.

Exposure to -20°C ± 5 with a fall over 2 hours and hold for 14 hours.

The test panel was inspected every 4 heat rain cycles and daily under the heat cold cycles to observe changes in the visual characteristics of the panel.

On completion of the cyclic testing the wall was left to dry for 7 days.

In addition to this the system was also subjected to freeze thaw cycles as detailed below.

3.2 Freeze Thaw Testing in Accordance with Clause 5.7.2.2 of ETAG 017:2005

The sample was then subjected to a series of 30 freeze/thaw cycles as detailed in Clause 5.7.2.2 of ETAG 017:2005.

Exposure to water for 8 hours at +23˚C (± 2˚C).

Freezing to -20˚C (± 2˚C), fall for 2 hours, held for 14 hours (16 hours total).

4 RESULTS

According to Section 6.4.6 of ETAG 034:

“The following defects shall neither occur during, nor at the end of the test programme:

- deterioration such as cracking or delamination of the cladding element that allows water penetration to the insulation;
- detachment of the cladding element;
- Irreversible deformation”.

According to Section 6.7.2.2 of ETAG 017:

"The performance requirement for the kit is judged to be satisfactory if the following defects don't occur during, or at the end of the test programme:

- cracking or delamination of the skin that allows water penetration to the insulation;
- cracking or delamination of seals between VETURE units;
- detachment of the skin;
- irreversible deformation."

No deterioration to the sample was noted following the testing hence the Ibstock Mechslip brick slip cladding panel is deemed to have passed the hygrothermal aging test.

NOTE: The results given in this report apply only to the samples that have been tested.

END OF REPORT

PLATES

Plate 1 – Panel Prior to Testing

Plate 2 – Panel following Testing