

**Title: Laboratory Testing of the Mortar  
Staining Resistance of  
ClearShield Coated Glass**

**Certificate of Test Number: 13688**

**Client's Name & Address:**

Ritec International Ltd UK  
Innova House  
Innova Science Park  
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Enfield  
EN3 7XH

Our Ref: N950/V018

TC Job No: 3NF3 – 1.312.02

Your Ref: P.O. POR00731

Date: 27 October 2010

Date samples received: 10 September 2010

Samples received from: Ritec International Ltd UK

Sample Nos: 145866 – 145867

Tested by:   
D J Thompson (position: Engineer)

Authorised by:   
Neal McDonald (position: Principal Engineer)

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**TECHNOLOGY CENTRE** 

## 1. INTRODUCTION

This certificate of test describes the laboratory based resistance to mortar staining of ClearShield coated glass carried out at the request of Ritec International Ltd UK between 16 Sept. and 25 Oct. 2010 at Technology Centre (TC), Leighton Buzzard.

The testing was carried out based upon the method given in BS 3712-2.

## 2. SAMPLE DESCRIPTION

Technology Centre received 2 panes of glass, 1 specimen coated with ClearShield and the other uncoated acting as a control. The specimens were given unique TC sample numbers for reference purposes only. Details of the received specimens are described in Table 1 below:

**Details of Specimens Received**

**Table 1**

| TC Ref | Specimen Details                           |
|--------|--|
| 145866 | Clear Float Glass                          |
| 145867 | Clear Float Glass, coated with ClearShield |

## 3. TEST PROCEDURE

### 3.1 Surface Preparation

Testing was carried out in an as-received condition. No cleaning of each sample was undertaken prior to the testing.

### 3.2 Preparation of Mortar

A mortar mix as specified in Section 2.2.3.2 of BS 3712-2 was prepared and 10No. dabs (approximately 25mm diameter) of the mortar were applied to both the coated and uncoated glass. The mortar was allowed to cure in high humidity conditions, as specified in Section 2.2.3.2, for a period of three days prior to the exposure tests sequence.

### 3.3 Test Procedure

At regular intervals during the exposure period, a mortar dab was mechanically removed and the glass inspected for any staining or scratching. Wiping of the glass substrate with a damp paper towel was also undertaken to see if any adhered mortar could be removed. Testing was started on 14 September 2010.

#### 4. TEST RESULTS

The observations of mortar staining and any potential scratching of both the coated and uncoated glass specimens are given in following tables below.

**Table 2**

| Inspection Date | Client Ref : Uncoated Glass                    | TC Ref : 145866                |
|-----------------|--|--------------------------------|
|                 | Observations on removal                        | Observations after cleaning    |
| 16-09-2010      | Discolouration to glass in shape of mortar dab | Scratches to glass from mortar |
| 27-09-2010      | Discolouration to glass in shape of mortar dab | Scratches to glass from mortar |
| 30-09-2010      | Discolouration to glass in shape of mortar dab | Small spots of mortar remain   |
| 04-10-2010      | Discolouration to glass in shape of mortar dab | Small spots of mortar remain   |
| 07-10-2010      | Discolouration to glass in shape of mortar dab | Small spots of mortar remain   |
| 11-10-2010      | Discolouration to glass in shape of mortar dab | Small spots of mortar remain   |
| 14-10-2010      | Discolouration to glass in shape of mortar dab | Small spots of mortar remain   |
| 18-10-2010      | Discolouration to glass in shape of mortar dab | Small spots of mortar remain   |
| 21-10-2010      | Discolouration to glass in shape of mortar dab | Small spots of mortar remain   |
| 25-10-2010      | Discolouration to glass in shape of mortar dab | Small spots of mortar remain   |

**Table 3**

| Inspection Date | Client Ref : Coated Glass  | TC Ref : 145867             |
|-----------------|----------------------------|-----------------------------|
|                 | Observations on removal    | Observations after cleaning |
| 16-09-2010      | No discolouration to glass | No trace of cement on glass |
| 27-09-2010      | No discolouration to glass | No trace of cement on glass |
| 30-09-2010      | No discolouration to glass | No trace of cement on glass |
| 04-10-2010      | No discolouration to glass | No trace of cement on glass |
| 07-10-2010      | No discolouration to glass | No trace of cement on glass |
| 11-10-2010      | No discolouration to glass | No trace of cement on glass |
| 14-10-2010      | No discolouration to glass | No trace of cement on glass |
| 18-10-2010      | No discolouration to glass | No trace of cement on glass |
| 21-10-2010      | No discolouration to glass | No trace of cement on glass |
| 25-10-2010      | No discolouration to glass | No trace of cement on glass |

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