

**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

END OF CERTIFICATE