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EVALUATION OF “EVO Stone” COATING SYSTEM FOR IMPACT RESISTANCE IN ACCORDANCE WITH ASTM D2794

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Proposal No.:	15-006-349178, Revision 2
Report No.:	15-06-P0067-C, Revision 1 4 pages
Date:	June 25, 2015

1.0 INTRODUCTION

At the request of *Carter fabricating Inc.*, Exova was retained to evaluate "EVO Stone" coating system for impact resistance in accordance with ASTM D2794-93.

All samples received were shipped to Exova facility in Mississauga, ON for testing. Upon receipt, the samples were assigned the following Exova Sample Number:

Client Sample Description	Exova Sample No.
<p>EVO STONE COATING - Stucco Coating (6" x 6" – 4 pieces & 12" x 12" – 3 pieces)</p> 	15-06-P0067

2.0 PROCEDURE

Testing was performed in accordance with the ASTM test method, described below:

Test Description	Test Method
Standard Test Methods for Resistance of the Organic Coatings to the Effects of Rapid Deformation (Impact)	ASTM D2794-93

Method:	ASTM D2794-93
Specimen Dimensions:	150 mm x 150 mm x 5 mm (nominal)
Impact Method:	Constant mass; variable height
Measurement Equipment:	Gardener Type Impactor Magnifier 5X MII #B13588
Indenter:	Hemispherical head having a 12.7 mm
Panel Support:	16.3 mm ID cylindrical hole
Guide Tube:	25 mm diameter cylindrical rod, wt. 935 g
Test Date:	2015-04-28

3.0 RESULTS

A summary of results is presented in Table 1. In all cases, SI units are the primary units of measure.

Table 1 – Impact Resistance <i>Exova Sample No.: 15-06-P0067</i>			
Impact direction	Mean Impact height, mm (inch)	Impact Resistance, J (Foot-Pound)	Comments
Intrusion (Stucco coated side)	400 (16)	3.7 (2.7)	Cracking around indent radius
Extrusion (Metal Panel Side)	150 (6)	1.4 (1.0)	Impact failure centered at impact point



Photo 4: Typical failure when struck from back side of plate (extrusion). Image of indent on the back face is also shown for reference



Photo 5: Typical failure when struck from front side of plate (intrusion). Hairline cracks along the outside of the indent which may not be visible in this image quality.

4.0 REVISION(S)

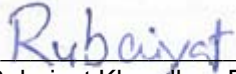
- 2015-06-02 Original Report.
- 2015-06-25 Imperial units were added to Table 1 and the conclusion.

5.0 CONCLUSION

The samples submitted by Carter Fabricating Inc., identified as "EVO Stone Coating System" has been tested for rapid deformation (impact) resistance in accordance with ASTM D2794-93, as described in this report.

The average impact resistance of the front of the plate was found to be 3.7 Joules (2.7 ft*lbs). When struck from the back of the plate, the sample had an average impact resistance of 1.4 Joules (1.0 ft*lbs).

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