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**EVALUATION OF COATED CONCRETE SLABS
FOR WIND-DRIVEN RAIN RESISTANCE
IN ACCORDANCE WITH ASTM D6904**

A Report to:	PermaTint 100 Bradwick Drive Concord, ON L4K 1K8
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Proposal No.:	15-006-355176 Rv3
Report No.:	15-06-P0152 - WDR 4 pages
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1.0 INTRODUCTION

At the request of *PermaTint*, Exova was retained to evaluate several configurations of coatings on concrete for Wind-Driven Rain. The intent of testing is to have a comparative study between two variations of silica based coatings and a latex based coating.

All samples were prepared by the client on concrete substrates. No detailed information was provided as to the method of coating application or amount of material applied. It is assumed that each coating was applied in accordance with the manufacturers' recommendations. All samples received at the Exova Mississauga facility for testing. Upon receipt, the samples were assigned the following Exova Sample Number:

Client Sample Description	Exova Sample No.
Coatings: 1 1050, 2 QuartzGuard Substrate: 8" x 16" x 1.5" concrete paver 3 specimen	15-06-P0152-F
Coatings: 1 1050, 2 Permasol Substrate: 8" x 16" x 1.5" concrete paver 3 specimen	15-06-P0152-G
Coatings: 1 Latex Primer, 2 Latex Substrate: 8" x 16" x 1.5" concrete paver 3 specimen	15-06-P0152-H

2.0 PROCEDURE

Testing was performed in accordance with the following ASTM test method:

Test Description	Test Method
Standard Practice for Resistance to Wind-Driven Rain for Exterior Coatings Applied on Masonry	ASTM D6904-03 (Reapproved 2013)

Due to the nature of silicate paints, the chemical curing process takes longer time periods than the curing process for latex based paints. In order to increase the curing process on the samples containing the QuartzGuard and Permasol, samples were heat aged for 21 days at 65°C and flushed with a head of CO₂.

2.1 Testing Details

ASTM D6904-03 (Reapproved 2013)

Substrate	Concrete Patio Pavers – Cut to 8" x 16"
No. of Specimens	3 for each coating configuration
Test temperature	ambient lab conditions
Test Pressure:	5 in. H ₂ O
Test Duration:	24 hr.

3.0 RESULTS

A summary of results is presented in Table 1, Table 2 and Table 3. In all cases, SI units are the primary units of measure.

Table 1 – Wind Driven Rain – 1 10580, 2 QuattrzGuard ASTM D6094 <i>Exova Sample No.: 15-06-P0152-F</i>	
Specimen No.	Observations
1	No observed water leakage
2	No observed water leakage
3	No observed water leakage

Table 2 –Wind Driven Rain– 1 10580, 2 Permasol ASTM D6094 <i>Exova Sample No.: 15-06-P0152-G</i>	
Specimen No.	Observations
1	No observed water leakage
2	No observed water leakage
3	No observed water leakage

Table 3 – Wind Driven Rain – 1 Latex Primer, 2 Latex ASTM D6094 <i>Exova Sample No.: 15-06-P0152-H</i>	
Specimen No.	Observations
1	No observed water leakage
2	No observed water leakage
3	No observed water leakage

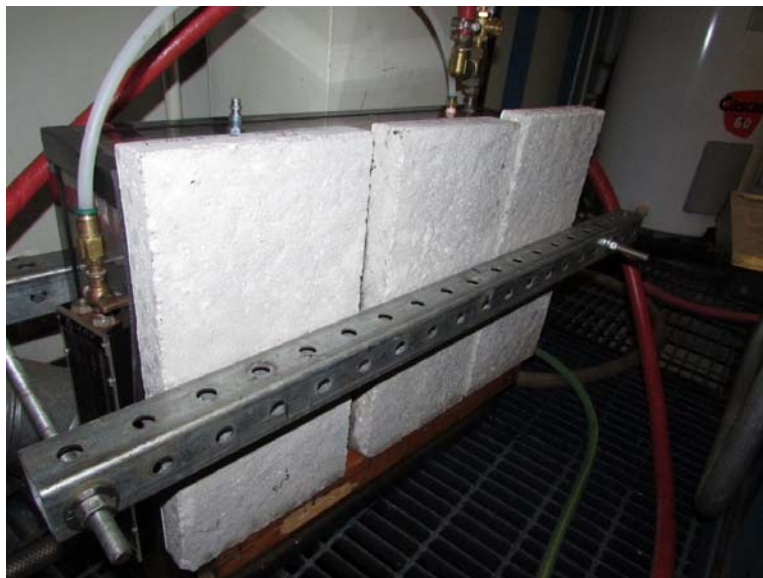


Photo B1: Image of blocks in test apparatus.


4.0 CONCLUSION

The samples submitted by PermaTint, identified as coated concrete slabs, have been tested for wind-driven rain resistance as described in this report. All of the samples displayed no observed moisture penetration on the rear uncoated surface of the blocks after the wind driven-rain test and therefore have passed the standard requirements.

5.0 REVISION(S)

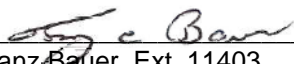
<u>Date</u>	<u>Revision</u>	<u>Description</u>
2016-07-12	0	Original Report.

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