

## LABORATORY SERVICES REPORT

Report Number: N1171191.0001

Service Date: 11/22/17

Report Date: 11/27/17

**Terracon**

611 Lunken Park Dr  
Cincinnati, OH 45226-1813  
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### Client

Chemtec International, Inc.  
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Cincinnati, OH 45244

### Project

Chemtec One Testing  
611 Lunken Park Dr.  
Cincinnati, OH 45226

Project Number: N1171191

**Table II**  
**Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals**  
**(ASTM C672-12, Modified to 100 Days)**

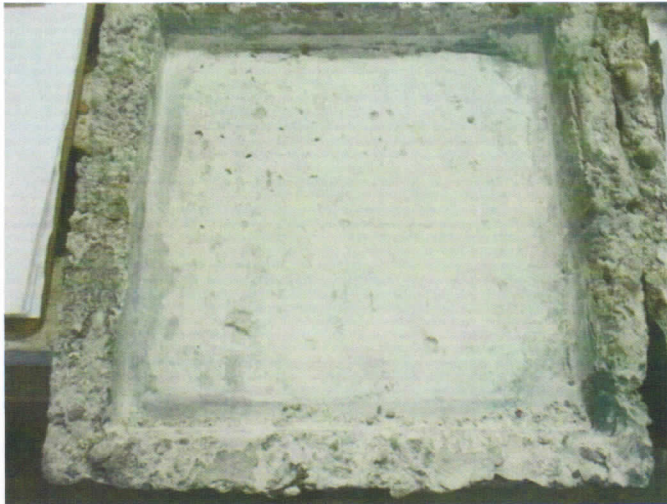
Sample	Rating	Condition of Surface
Untreated 1	5	Severe Scaling
Untreated 2	5	Severe Scaling
ChemTec ONE Treated 1	0	No Scaling
ChemTec ONE Treated 2	2	Very slight to moderate scaling

ASTM C672 requirement is for 50 cycles of freezing and thawing with calcium chloride solution being ponded during the test, then we rate the results. For the test results above, 100 cycles were performed rather than 50 cycles in order to accommodate an end user's request. It should be noted that scaling was only evident on the ChemTec ONE treated sample after 75 cycles. Photographs of the samples after 100 cycles of freezing and thawing accompany this report.

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

## Scaling Resistance of Concrete Surface Exposed to Deicing Chemicals

### ASTM C672-12, After 100 Cycles

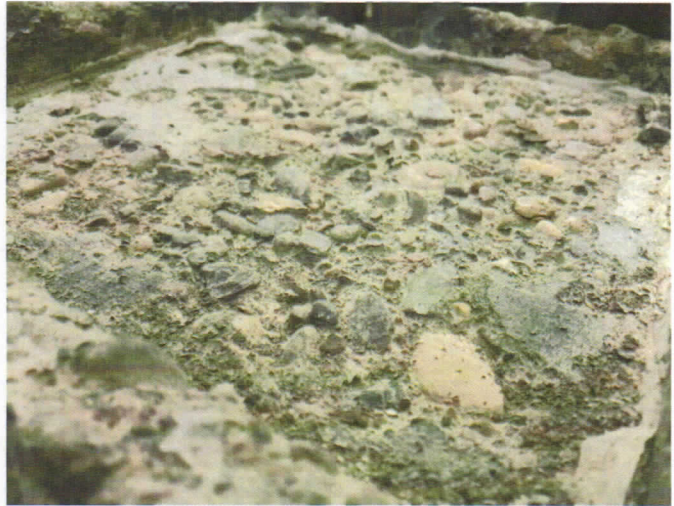


**Photo 1:** Left photo shows Sample 1 treated with ChemTec ONE solution and right photo shows Sample 1 untreated after 100 Freeze-Thaw cycles. Note severe deterioration of the untreated sample and nearly complete surface loss.



**Photo 2:** Left photo shows Sample 2 treated with ChemTec ONE solution and right photo shows Sample 2 untreated after 100 Freeze-Thaw cycles. Note severe deterioration of the non-treated sample and complete surface loss.





**Photo 3:** Close-up showing Sample 1 treated with ChemTec ONE solution (left photograph) and Sample 1 untreated (right photograph) after 100 Freeze-Thaw cycles. Note severe deterioration of non-treated sample and protruding coarse aggregate.



**Photo 4:** Close-up showing Sample 2 treated with ChemTec ONE solution (left photograph) and Sample 2 untreated (right photograph) after 100 Freeze-Thaw cycles. Note severe deterioration of non-treated sample and protruding coarse aggregate.