



# Chem-Crete PaviX<sup>®</sup> CCC100

## Concrete Moisture Protection System For Airport, Highway & Bridge Structures

### PRODUCT DESCRIPTION

**Chem-Crete PAVIX CCC100** is a unique water-based chemical product for the moisture protection of large-scale concrete substrates against temperature and water associated problems such as thermal cracking, damage caused by repeated freeze and thaw cycles, chloride ion penetration, as well as alkali silica reactions.

Chem-Crete PAVIX CCC100 keeps treated concrete reasonably dry, thus helping to eliminate most water and moisture associated problems. Chem-Crete PaviX CCC100 provides three effective mechanisms for concrete protection in all weather conditions by formation of two types of crystals and water repellency. In the presence of moisture, one type of the crystals present in the product swells, therefore, blocking the pores completely. The second type of crystals absorbs the extra moisture on the surface of the first crystal preventing surface moisture on that crystal from diffusion to the concrete. These hydrophilic and hygroscopic properties provide double and durable protection against moisture penetration in concrete.



### ADVANTAGES & BENEFITS

- Provides long lasting internal waterproofing and moisture blocking from positive and negative sides.
- Excellent repelling property preventing water, jet fuel and oil penetration intrusion from the surface.
- Resists aggressive chemicals such as acids, caustics Jet fuels and oil.
- Protects reinforcing steel bars against corrosion without any negative effect on existing steel cathodic protection.
- Enhances the adhesion property of joint sealant and concrete road markers.
- Reduces Alkali Silica Reactions (ASR), and eliminates silicate dusting.
- Prevents penetration of chloride ions from de-icing salts.
- Eliminates damage caused by repeated freezing and thawing cycles.

- Prevents concrete scaling.
- Increases concrete hardness.
- Seals and protects cracks up to 1/16<sup>th</sup> inch / 1.5 mm.

### FIELDS OF APPLICATION

Chem-Crete PAVIX CCC100 can be used as a treatment and protection against water and moisture associated problems for all concrete and cementitious structures.

- |                  |                         |
|------------------|-------------------------|
| Airport Runways  | Airport Taxiways        |
| Aircraft Parking | Bridges                 |
| Tunnels          | Concrete Roads-Highways |
| Parking Lots     | Buildings               |
| Sea Ports        | Walkways                |

### PACKAGING

<u>Product</u>	<u>Packaging</u>
<b>Chem-Crete PaviX CCC100</b>	5 gal pail or 55 gal drum (18.93 L pail or 208 L drum)

### TECHNICAL SPECIFICATIONS

#### Physical Properties:

Specific Gravity	1.1
Viscosity	2.4 centipoises
Freezing Point	28°F / -4°C
Boiling Point	219°F / 104 °C
Environmental Hazards	None
Color	Clear
Odor	None
Toxicity	None
Fumes	None
Flammability	None

#### Product Performance:

Chem-Crete PaviX CCC100 complies with the following standards:

#### ASTM STANDARDS:

ASTM C666-97 Standard Test Method for Resistance of Concrete to Rapid Freezing & Thawing.

ASTM C 1262-98 Standard Test Method for Evaluating the Freeze Thaw Durability of Manufactured Concrete Masonry Units and Related Concrete Units.

ASTM C 672-98 Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals.

ASTM C1218 Standard Test Method for Water-Soluble Chloride in Mortar and Concrete.

ASTM C1202-97 Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration.

ASTM D6489-99 Standard Test Method for Determining the Water Absorption of Hardened Concrete Treated With a Water Repelling Coating.

ASTM C944-99 Standard Test Method for Abrasion Resistance of Concrete or Mortar Surfaces by the Rotating-Cutter Method.

ASTM D4541-95 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.

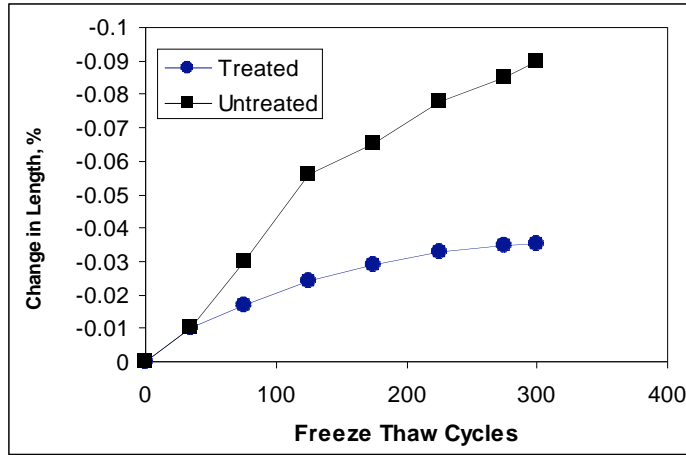
ASTM F609-96 Standard Test Method for Measuring Static Slip Resistance of Footwear Sole, Heel or Related Materials Using a Horizontal Pull Slipmeter (HPS).

ASTM E303-93 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.

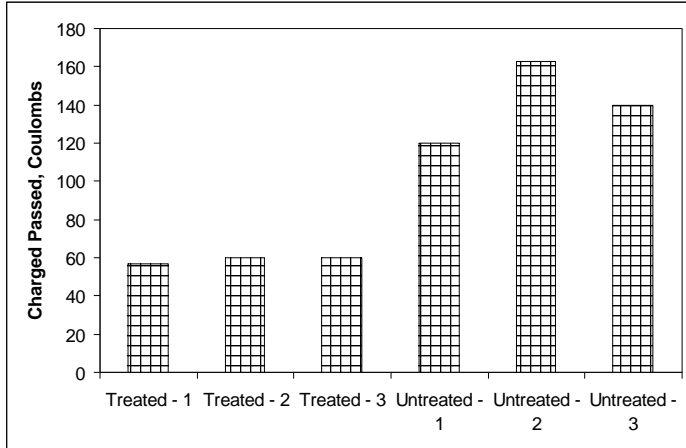
ASTM C 642-97 Standard Test Method for Density, Absorption, and Voids in Hardened Concrete.

ASTM C 457-98 Standard Test Method for Microscopical Determination of Parameters of the Air Void System in Hardened Concrete.

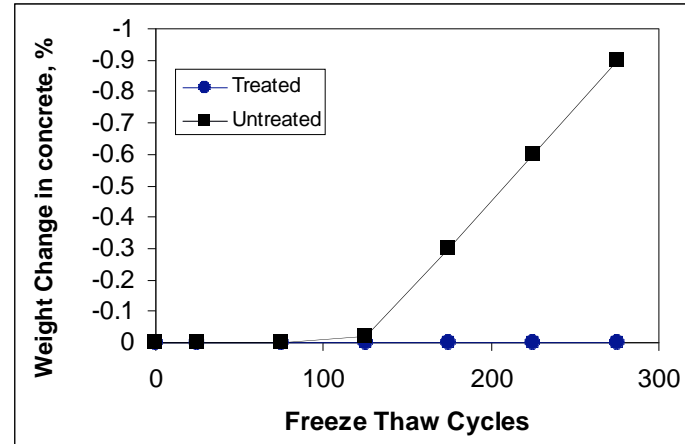
AASHTO T259-00 Resistance of Concrete to Chloride Ion Penetration.



Freezing & Thawing effect on treated & untreated concrete samples  
ASTM C666-97



Chloride Ion Penetration tests on treated & untreated concrete samples  
ASTM C1202-91 and AASHTO T259



ASTM C-666-97

**Other Standards**

ISO 2812-2:1993	Paints and varnishes -- Determination of resistance to liquids -- Part 2: Water immersion method
CSN 73 2578	Test for Water-tightness of Surface Finishes of Building Materials
CSN 73 1326	Determination of resistance to de-icing salts
GOST 12730.5-84	Concretes. Method for the determination of water tightness
GOST 10060-87	Concretes. Methods of frost resistance determination

## APPLICATION

Concrete surfaces must be clean and sound prior to application of the product. Proper cleaning will open the surface pores and capillaries in order to enhance the penetration process. Compressed air can be used to remove dust and loose particles from the surface. Flushing the area to be treated with water can improve the cleaning process, however for heavily contaminated areas; special concrete cleaning agents such as Chem-Crete CONCLEAN CCC 060 can be used to remove dirt especially those contaminated with oil.

For large-scale applications, such as airport runways, it is recommended to spray the product using a heavy-duty commercial sprayer.

### **Coverage:**

It is recommended to apply Chem-Crete PaviX CCC100 at an average rate of 150 to 200 ft<sup>2</sup>/gal (3.7 to 4.9 m<sup>2</sup> / lit) in one coat.

### **Limitations:**

Do not apply Chem-Crete PaviX CCC100 in the following cases:

If temperature falls below 40°F (5°C).

### **Do Not Allow Product to Freeze.**

To areas previously treated with sealing agents unless these sealers are removed by chemical or mechanical means.

## STORAGE

Chem-Crete PaviX CCC100 must be stored under room temperature. Cold temperatures may cause the product to crystallize. Shelf life is ONE YEAR in its original unopened packaging.

### **Do Not Allow Product to Freeze.**

## SAFETY PRECAUTIONS

As with all construction chemical products, adequate precautions and care must be taken during usage and storage. Avoid direct contact with foodstuff, eyes, skin, and mouth. Any direct contact with skin, eyes, etc. should be washed thoroughly with clean running water and soap.

**Always wear protective goggles and gloves. In case of eye contact, flush for 15 minutes with warm water. Keep out of reach of children.**

## TECHNICAL ASSISTANCE

Please contact International Chem-Crete Corporation for Technical Personnel.

## WARRANTY

**LIMITED WARRANTY:** International Chem-Crete Inc. warrants that, at the time and place we make shipment, our materials will be of good quality and will conform to our published specifications in force on the date of acceptance of the order.

**DISCLAIMER:** The information contained herein is included for illustrative purposes only and, to the best of our knowledge, is accurate and reliable. International chem-crete Inc. is not under any circumstances liable to connection with the use of information. As International Chem-Crete Inc. has no control over the use to which others may put its products, it is recommended that the products be tested to determine the suitability for specific applications and/or our information is valid in a particular circumstances. Responsibility remains with the architect or engineer, contractor and owner of the design, application and proper installation of each product. Specifier and user shall determine the suitability of the product for specific application and assume all responsibility in connection therewith. MN/112007

**Manufactured By:**



International Chem-Crete Inc., 800 Security Row, Richardson, TX 75081, U.S.A

Tel: (972) 671-6477, Fax: (972) 238-0307

[contactus@chem-crete.com](mailto:contactus@chem-crete.com)

[www.chem-crete.com](http://www.chem-crete.com)