

CHEM-CRETE PAVIX™ (CCC100)

THE ULTIMATE TREATMENT & PROTECTION SYSTEM FOR HIGHWAYS, BRIDGES AND AIRPORT RUNWAYS

PRODUCT DESCRIPTION

Chem-Crete PAVIX is a unique water-based chemical product that is intended to provide a permanent treatment and ultimate protection of large-scale concrete pavements against temperature and moisture 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 is the only product of its kind that combines the repelling function along with a hygroscopic and hydrophilic moisture blocking mechanism. Its low viscosity allows it to penetrate easily and deeply into concrete pavements where it reacts and results in an outstanding performance.

The protection property of Chem-Crete PAVIX takes place in two different mechanisms. First, it provides the concrete surface with an excellent repelling feature that prevents water from penetrating into concrete through capillaries by increasing the surface tension of water and other liquids such as jet fuel and oils. It blocks water and vapor movements within the capillaries and pores via a crystallization process. The crystals formed by PAVIX treatment are of *hygroscopic* and *hydrophilic* properties that provide a double action in moisture blocking. Under wet conditions, and upon contact with moisture, the hydrophilic behavior allows the crystals to swell and fill the void preventing moisture from passing through. Simultaneously, the hygroscopic property of the crystals provides a continual crystal growth towards the source of moisture, resulting in permanent moisture blocking at source.

Under dry conditions, the crystals release the moisture in a desorption process that makes the crystals shrink to their original size. The swelling/shrinking process of the crystals will allow the concrete to continually breath.

Chem-Crete PAVIX promises to keep treated concrete reasonably dry, thus eliminates all water and moisture associated problems. It will also seal cracks up to $\frac{1}{16}$ th of an inch and increase the concrete hardness. Therefore, it will prolong the life span of the structure and dramatically reduce maintenance cost.

ADVANTAGES & BENEFITS

- Prevents penetration of chloride ions from de-icing salts.
- Eliminates damage caused by repeated freezing and thawing cycles.
- Provides permanent internal waterproofing and moisture blocking from positive and negative sides by hygroscopic and hydrophilic crystallization mechanisms.
- Excellent repelling property preventing water, jet fuel and oil penetration from the surface.
- Resists aggressive chemical 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 road markers.
- Reduces Alkali Silica Reactions (ASR) thus eliminates silicate dusting.
- Increases concrete hardness.
- Seals and protects against hairline and thermal crack.

FIELDS OF APPLICATION

Chem-Crete PAVIX can be used as a treatment and protection against water and moisture associated problems for all kinds of concrete and cementitious structures. However, it is considered highly cost effective for the treatment of:

- Airports Runways
- Planes Parking Areas
- Tunnels
- Parking Lots
- Airport Taxiways
- Bridges
- Concrete Roads & Highways

TECHNICAL SPECIFICATIONS

Physical Properties:

Specific Gravity:	1.073	Color:	Clear
Viscosity:	2.4 centipoises	Odor:	None
Freezing Point:	25°F	Toxicity:	None
Boiling Point:	218°F	Fumes:	None
Environmental Hazards:	None	Flammability:	None

Product Performance:

Chem-Crete PAVIX has been developed to comply with the following standards:

American Society for Testing and Materials (ASTM):

- ✓ ASTM C 666 Resistance of Concrete to Rapid Freezing & Thawing.
- ✓ ASTM C 672 Scaling Resistance of Concrete Surfaces Exposed to De-Icing Chemicals.
- ✓ ASTM C 1218 Water-Soluble Chloride in Mortar and Concrete.
- ✓ ASTM C 944 Abrasion Resistance of Concrete or Mortar Surfaces.
- ✓ ASTM D 4541 Pull Off Strength of Coating

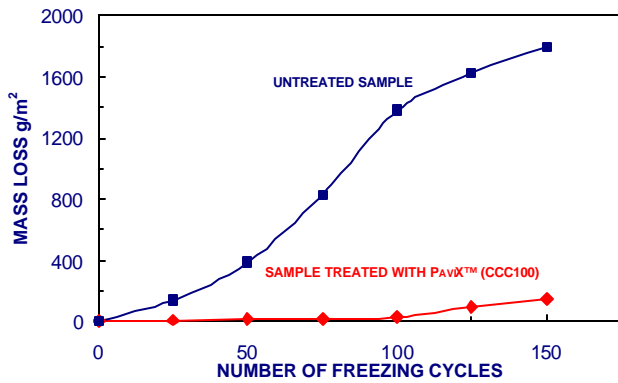
Czech Republic Standards:

- ✓ CSN 73 1326: Surface Corrosion Resistance Test Of Cyclic Freezing In Salt Solution
- ✓ CSN EN ISO 2812-1 Chemical Resistance Test.
- ✓ CSN 73 6177 Surface Skid Resistance Test
- ✓ CSN 73 2578 Water-Proofing Test of Concrete
- ✓ CSN EN 1062-3 Water Absorption Test of Concrete

Russian Government standards:

- ✓ GOST 12730.5-84
- ✓ GOST 22690-88
- ✓ GOST 12780.1-78
- ✓ GOST 10060-95
- ✓ GOST 12730.1-78
- ✓ GOST 10180-90

PATENT PENDING



Freezing & Thawing effect on treated & untreated concrete samples

SURFACE PREPARATION & APPLICATION

Concrete surfaces must be clean and sound prior to applying the product. 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 can be used to remove dirt especially those contaminated with oil. The surface must be allowed to dry prior to applying Chem-Crete PAVIX

Chem-Crete PAVIX can be applied to concrete surfaces in one single coat only by means of spraying, sweeping or brushing. 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 at a rate of 150 to 200ft²/gallon (3.6 to 4.8m²/l).

Limitations:

Do not apply Chem-Crete PAVIX in the following cases:

- If temperature falls below 40°F.
- To areas previously treated with sealing agents unless these sealers are removed by chemical or mechanical means.

PACKAGING

Chem-Crete PAVIX is available in 55 gallon drums and 220 gallon totes.

STORAGE

Chem-Crete PAVIX must be stored under ROOM TEMPERATURE. Cold temperatures may cause the product to crystallize. Shelf life is ONE YEAR in its original unopened packaging.

SAFETY PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN

Adequate precautions and care must be taken during usage and storage. Avoid direct contact with eyes and skin. Keep away from children and animals. Any direct contact with skin, eyes, etc. should be washed thoroughly with clean water. Use proper safety wear, goggles, and mask, etc.

WARRANTY

Limited Warranty: "International Chem-Crete Corporation warrants that, at the time and place we make a shipment, our product will be of good quality and will conform to our published specifications in force on the date 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 Corporation cannot, however, under any circumstances make any obligation or liability in connection with the use of this information. As International Chem-Crete Corporation has no control over the use to which others may put its products, it is recommended that the products be tested to determine if suitable for specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine suitability of products for specific application and assume all responsibilities in connection therewith.

Manufactured by:



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