



PAVIX: Proven Winner for All Airport Concrete Infrastructure

International Chem-Crete Corporation (ICC) manufactures and sells PAVIX, a unique line of crystalline waterproofing products that penetrate into the surface of cured concrete to fill and seal pores and capillary voids, creating a long lasting protective zone within the concrete substrate.

Once concrete is treated, water is prevented from penetrating through this protective zone and causing associated damage, such as freeze-thaw cracking, reinforcing steel corrosion, chloride ion penetration, and ASR related cracking.

Founded in 1969, in Dallas, Texas, ICC has grown into an international leader in VOC free waterproofing chemicals, with exports to over 65 countries. ICC is focused on making environmentally safe water based and solvent free waterproofing products.

Chem-Crete PAVIX CCC100 is known to be environmentally safe for treating Airports. The long list of airports around the world treated with PAVIX is proving not only superior concrete protection to its infrastructure but minimizing costs associated issues such as time, labor, dry time and ease of application! With PAVIX being 100% green there's no need to block off sensitive areas to public, fueling areas, de-icing areas or confined spaces.





SPRAY BAR MOUNTED ON T/C MACHINE



APPLICATION



Kelowna International Airport, in British Columbia, serves 1.6 million passengers annually. As one of the busiest airports in Canada, YLW is committed to environmental protection and improving environmental performance. PAVIX CCC100 is a 100% green technology and YLW has embraced the PAVIX crystalline technology.

And in just two years, much of the Canadian airport industry also gravitated towards PAVIX, some of the largest airports are either using or researching the use of PAVIX, airports such as: Toronto Pearson (YYZ), Vancouver International (YVR), Halifax (YHZ), Gander (YQX), Dawson Creek (YDQ), Southport Manitoba (YPG), Fredericton (YFC), Kelowna International (YLW) and the Canadian Department of National Defense.

PAVIX CCC100 is a unique advanced water-based technology designed for the protection of large-scale concrete substrates against moisture intrusion and associated damage. Damage such as repeated freeze/thaw cycles, advanced de-icing chemical brines, as well as alkali silica reactions are all issues where PAVIX CCC100 is superior in protection.

PAVIX CCC100 assists treated concrete by mitigating moisture intrusion and eliminating or reducing moisture and water associated problems. Freeze/thaw effects, chlorides, ASR (alkali silica reactions), oxychloride and pop-outs are all reduced or eliminated. 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 crystal swells, therefore, blocking the pores completely. The second crystal absorbs the extra moisture on the surface of the first crystal preventing surface moisture from diffusion into the concrete.

These hydrophilic and hygroscopic properties provide advance double and durable protection against moisture penetration into the concrete. PAVIX CCC100 has undergone a battery of ASTM specified tests by multiple independent testing laboratories familiar with current concrete testing methods. The current ASTM tests are as follows: Freeze-Thaw test C-666, Scaling Test C-672, Product Penetration C-856, Abrasion Resistance C-944, Water Soluble Chloride C-1218, Pull-Off Strength Test D-4541 and Water Vapor Transmission E96.

ADDITIONAL FACTS ABOUT PAVIX CCC100 GROWTH TECHNOLOGY

How long does PAVIX last? PAVIX product application is long lasting. Once placed, the crystals remain active indefinitely. Its unique crystalline growth structure will not deteriorate.

How resistant is PAVIX to chemicals? Based on independent testing PAVIX is not affected by a wide range of chemicals including mild acids, solvents, chlorides and caustic materials. It is resistant to oils, and Jet fuels. And it protects against glycol and de-icing liquid as well. PAVIX greatly enhances glycol reclamation effects, PAVIX has the ability to shed glycol off of the surface to the reclamation tanks.

Is PAVIX affected by temperature, humidity, ultraviolet and oxygen levels? Humidity, ultraviolet and the oxygen level (oxidation) have no effect on a PAVIX. As humidity increases, the crystals actually swell in the capillaries to block moisture from entering the capillary.

Does PAVIX protect reinforcing steel? Yes. By preventing the intrusion of chemicals, salt water, sewage and other harmful materials, PAVIX protects concrete and reinforcing steel from deterioration and oxidation. If corrosion has already present, it will slow the process by not allowing moisture to enter.

Is PAVIX toxic? No. PAVIX contains no volatile organic carriers (VOC) and is completely safe to the environment.

Can PAVIX be applied against hydrostatic pressure? Yes. Because PAVIX is not dependent upon adhesion to the concrete surface and instead becomes an integral part of the concrete mass through crystallization, it is capable of resisting hydrostatic pressure from either side (positive or negative) of the concrete.

Is PAVIX used to waterproof cracks, joints and other defects in concrete? Yes. PAVIX has a specific repair system that utilizes its unique crystalline waterproofing technology to stop water flow through up to 1/16 cracks. In the case of expansion joints or chronic moving cracks, a flexible sealant is recommended.



Is PAVIX suitable for use on surfaces other than concrete? PAVIX is totally compatible with the chemistry of concrete, whether poured in-place, pre-cast or concrete block. PAVIX may also be used on mortar, plaster, stucco, terrazzo, exposed aggregate and any sand aggregate cement combination.

Can paint and other finishing materials be applied over a PAVIX coating? Yes. Paint, cement purge coats, plaster and stucco can be applied or installed over concrete protected with PAVIX.

What are some typical PAVIX applications? PAVIX can be applied to any concrete surface. Applications include bridge decks, airport runways, aprons, taxiways, ramps, de-icing areas, hangers, tunnels, parking structures, sidewalks, underground vaults, foundations, roof decks, and below grade construction.



INSTALLED PRODUCT PERFORMANCE

Description Test Method Results Toxicity 48 Hour Acute Toxicity Test Non-toxic to flora and fauna

V.O.C. Content 0

Chloride Ion Penetration ASTM C1202/AASHTO T277 < 2000 coulombs

Abrasion Resistance ASTM C 944 4.2 grams / m²

Water Vapor Trans. ASTM E 96 2.0 Perms

Adhesion ASTM C 1583 400 PSI

Scaling Resistance ASTM 672 Not to exceed 0.64

Static Slip Resistance ASTM F 609 No Effect Skid Resistance

ASTM E 303 No Effect Freeze/Thaw 300 Cycles

ASTM C 666 Mass change not to exceed 0.09 percent Freeze/Thaw 300 Cycles

ASTM C 666 Length Change not to exceed -0.017 percent Freeze/Thaw 300 Cycles

ASTM C666 RDM 97 percent Water Absorption ASTM D 6489 1.5 percent by wt./ 7 Days

How is PAVIX different from other products? The dual PAVIX crystalline formation (hygroscopic and hydrophilic) for concrete waterproofing is substantially different from traditional barrier products (membranes, cementitious coatings):

- PAVIX creates a crystalline structure deep within the pores and capillary tracts of the concrete mass to prevent the penetration of water and aggressive chemicals and also forms a barrier at the surface of the concrete.
- PAVIX is resistant to hydrostatic pressure.
- PAVIX will seal hairline cracks up to 1/16 inch.
- PAVIX will not deteriorate after years of intense service.
- PAVIX is long lasting and crystals activate whenever moisture is present.

What is the recommended application rate for PAVIX?

Typically, a coverage rate of between 150 and 200 square feet per gallon will provide ample coverage. Consultation with the manufacturer's technical department or a local PAVIX representative for assistance in determining the appropriate dosage rate based on specific requirements and conditions of your project.

How easy is it to apply PAVIX? One single application of PAVIX is all you need. PAVIX is the viscosity of water and applied so. Using a low PSI sprayer (backpack or boom) makes it simple to apply. You can apply PAVIX on freshly poured concrete at de-bleeding/de-watering stage as long as there's a curing compound used immediately after. Thus, the construction process is not slowed down.



4101 106th St. Des Moines, IA 50322

Toll Free **844.708.9048**

| US & Canada Sales & Marketing **641.757.2555**

| **ICCdistributiongroup.com**

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