ZIRCONIA™

Ending Concrete Corrosion

AquaGuard™

Product **Sheet**

AquaGuard™ Coating System

AquaGuard is an ultra-dense ceramic surface treatment which seals and stabilizes concrete. It is similar in characteristics to a green non-stick frying pan surface.

This coating system protects concrete surfaces from corrosion, abrasion, and biological growth. This new technology is an ideal solution fo protecting concrete in wastewater or freshwater treatment facilities, pipes, canals and dam structures from corrosion.

Product Description

AquaGuard is a chemically bonded ceramic-silicone hybrid coating designed for water infrastructure. Applied directly over Zirconia's CeramycGuard™, this 100% solids technology will penetrate into the CeramycGuard, creating a dense glass-like composite, providing an ultra-durable ceramic wear layer for maximum longevity.

This technology heals and seals concrete, replacing lost cement from the corrosion process, rebonding concrete. Cracks and porosity are eliminated during the application process. Where more extensive porosity is present due to age and corrosion, advanced ceramics like Silica-Carbide can be added to this coating system for additional structural integrity, wear resistance and longevity.

Our goal is to add 30 years of life to every concrete structure.

Product Features

- Chemically bonded, permanent (will not peel or delaminate)
- Chemical resistant (Chlorine and Fluorine)
- Biologically Impervious (oxidative)
- Protects against osmotic corrosion
- Highly resistant to UV
- Immune to humidity
- Non-breathable
- Harder, denser, and more durable than concrete
- Stabilizes concrete (chemically and physically)
- Near 0 VOCs

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FEATURE	ADVANTAGE	BENEFIT
Chemically Bonded	Will not delaminate, chalk, or peel	Permanent coating system will significantly extend the life of the concrete structure
Biologically Impervious™	Antimicrobial, oxidative surface eliminates porosity and microbial habitat	Prevents microbial biofilm proliferation
Chemical Resistant	Chlorine and Fluorine Resistant	Durable in industrial water treatment facilities of all kinds
Non-porous, non-breathable	Disallows ingress of corrosive chemicals and water vapor	Prevents corrosion of concrete and structural rebar
UV Tolerant	Resists degradation from UV exposure	Will have extended lifespan, even outdoors
Low toxicity	100% solids technology (Near 0 VOC)	Improves worker safety, decreases toxicity to environment
Prevents osmotic corrosion of cement binder	Stabilizes and protects cement binder from dissolution	Prevents deterioration of concrete in deionized water and stops the loss of calcium
Coating rebonds concrete	Eliminates porosity and fixes cracks	Replaces cement binder lost from corrosion

About Zirconia

Zirconia is a green-tech company that manufactures Ceramic Surface Treatment (CST) coatings for restoring and preserving the inorganic surfaces of concrete infrastructure. CSTs are a new type of inorganic, nano-ceramic coating that leverages the quantum effects of nanoscale ceramic particles to chemically bond and form ultra-durable ceramic composites with the surface of concrete. This new inorganic coating technology offers multiple benefits, including repairing corrosion damage and preventing corrosion from occurring on concrete surfaces permanently.

Zirconia's technology is a revival of Roman Cement as a nano-ceramic coating, with the same lifespan as Roman Cement mortars that built the Colosseum and Pantheon, still standing after 2,000 years.




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