



CeramycGuard™ Ceramic Surface Treatment

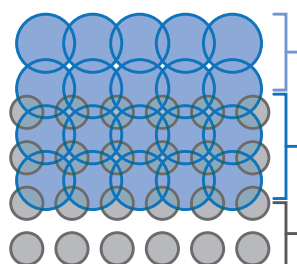
CeramycGuard seals and protects concrete from carbonation, salts, and weathering, stopping concrete corrosion. It is an ideal solution for both new concrete protection, and long-term corrosion repair.

Product Description

Zirconia's CeramycGuard™ Ceramic Surface Treatment (CST) is an inorganic, nano-alumina-silicate coating, which chemically bonds with the concrete surface, forming a permanent composite layer. This technology restores and protects concrete surfaces from corrosion indefinitely.

This coating is an analogue of granite, or Roman Cement.

Corrosion Stops Here. CeramycGuard eliminates porosity, and is immune to carbonation, salts, UV, and moisture. This means that once applied and cured, it permanently modifies the surface characteristics of the treated concrete asset, eliminating corrosion pathways and surface vulnerability to environmental attack. With a surface that cannot corrode, structural concrete and reinforcing steel are protected.



CeramycGuard™
Ceramic Surface Layer

Composite
CeramycGuard + Concrete Layer
CeramycGuard chemically bonds to the concrete surface creating a coating that will not peel, flake, chalk or deteriorate

Concrete Surface

Product Features

- Chemically bonded (will not peel or delaminate)
- Immune to carbonation and salt
- Immune to UV
- Immune to moisture
- Impervious to heat and cold (freeze-thaw)
- Repairs surface corrosion damage
- Permanently fixes cracks and spalls
- Non-porous yet breathable
- Biologically Impervious
- Harder, denser, and more durable than concrete
- Waterborne, non-toxic (near-zero VOC)
- High temperature service (2000°F no degradation)
- Stabilizes concrete (chemically and physically)

CeramycGuard™ Ceramic Surface Treatment

FEATURE	ADVANTAGE	BENEFIT
Ultra-Durable Ceramic	Concrete gains long-term performance of a geopolymer (Roman cement) at a fraction of the cost	Can double, triple, or quadruple, the life of the concrete asset
Chemically Bonded	Will not delaminate, chalk, or peel	Coating has indefinite lifespan; drastically reduces long-term maintenance costs (for life of asset)
Non-porous	Disallows ingress of corrosive chemicals	Protects concrete and helps protect embedded reinforcing steel
Breathable	Won't trap water vapor	Allows water vapor to escape freely, discouraging rebar corrosion
Carbonation Immune	Will not degrade from carbonic acid exposure	Treated area no longer vulnerable to carbonation corrosion
Salt Immune	Strongly inhibits salt ingress	Reduces or eliminates salt corrosion in concrete, helps preserve steel
Biologically Impervious	Active antimicrobial surface	Microorganisms cannot proliferate, or create biofilm on a coated surface
UV Immune	Will not degrade from UV exposure	Coating becomes denser and stronger over time from UV exposure; photocatalytic
Thermally Compatible w/Concrete (freeze-thaw immune)	Will match expansion and contraction of concrete through thermal cycles	Coating exposure will not delaminate from concrete
Oxidative/photocatalytic	Self-cleaning properties, especially in the presence of direct sunlight	Reduces the need for cleaning, and improves aesthetics
Waterborne, non-toxic	Near-zero VOC	Can be applied during normal hours of operation and improves worker safety

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.