ZIRCONIA™
Ending Concrete Corrosion

Fortress XD™
Product **Sheet**

Fortress XD™

A two-layer composite system that provides a tough, non-slip finish that protects concrete from corrosion, salt, carbonation, and weathering.

Military Grade And Battle Ready.
This concrete surface treatment technology is made for long-term durability in the toughest environments. **Zirconia Fortress XD** provides an attractive, durable non-slip surface, while protecting the concrete from corrosion, salt, carbonation, weathering, and abrasion. Zirconia Fortress XD is reinforced with Alumina and Silica Carbide to achieve maximum wear and chemical resistance. Fortress XD is made for use as the topcoat for Zirconia's Ceramic Surface Treatment (CST) system.

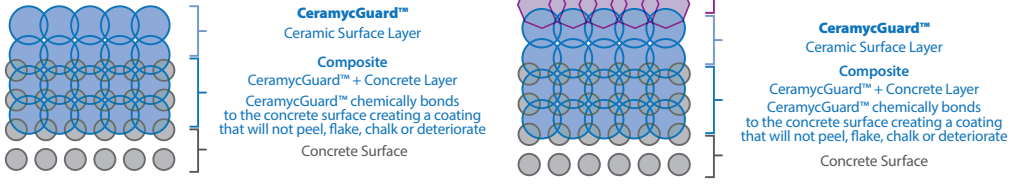
Ceramic Surface Treatment (CST) Technology
As part of the CST system, Zirconia Fortress XD chemically bonds into Zirconia's CeramycGuard (CG) inorganic primer layer, which is itself chemically bonded into the concrete surface. CG restores concrete by replacing lost cement, fixing cracks and glueing all elements together in a "skin of granite" making it the only "restorative primer" on the market for concrete.

Next Generation Technology
Zirconia Fortress XD combines the best traits of advanced ceramics and organic polymers. Ultra-hard ceramics increase resistance to wear and abrasion. Dense organic polymers improve cleanability and chemical resistance. Inorganic and organic crosslinking optimize density. Working together, these elements also reinforce a durable non-slip surface ensuring safety.

Integral Non-Slip
Integral non-slip properties can be engineered to need, for example, tall and spiky for industrial applications, or lower and rounded for bare feel poolside, etc. Please consult with your Zirconia representative.

Warranty
As part of the CST coating system, Zirconia Fortress XD prevents corrosion from salts, carbonation, and weathering. It comes with an industry changing 15-year Non-Disbondment and Non-Corrosion Warranty. Fortress XD is the only concrete surface treatment system on the market with this type of warranty.

How It Works



SAMPLE USES

Zirconia Fortress XD is an excellent solution for protecting and preserving indoor and outdoor concrete surfaces in commercial, industrial, residential, and institutional applications including:

- **Condominium/multi-family:** parking decks, pool decks and equipment rooms, dumpster/ trash rooms, under paver applications
- **Commercial:** parking garages, loading docks, office space, kitchens/catering spaces
- **Industrial:** manufacturing, production areas, distribution, maintenance areas
- **Airport:** hangars, de-icing decks, storage and maintenance facilities
- **Public buildings:** malls, schools, fire stations, bus stations
- **Food manufacturing:** main facilities, meat cutting, and cold storage
- **Agriculture:** grain silos, dairy (new), livestock
- **Energy:** fuel storage silos, bio-based energy decks
- **Waste:** transfer stations, organic recycling, renewable recycling facilities

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Fortress XD™

Fortress XD Traffic System

FEATURE	ADVANTAGE	BENEFIT
Easy-to-clean	Surface is dense and chemically resistance, rejecting dirt and grime accumulation.	Coating will reject contaminants from autos or food stuffs, allowing for easy cleaning. (Regular Auto scrubbing with green cleaner is recommended.)
Chemically Bonded	Forms a chemically bonded composite with the CeramycGuard primer/concrete layer that cannot delaminate, chalk, or peel.	Coating cannot tear or debond from the concrete surface.This property extends the lifespan of the coating significantly.
Integral Non-Slip (Bonded)	Integral non-slip elements have extreme resistance to wear.	Provides best in-class non-slip safety for the public and workers.
Wear Resistant	Resists hot-tire turning and tire-related friction from heavier vehicles.	Will resist weighted abrasion from heavy vehicles, including electric cars and trucks.
Chemical Resistant	Withstands a wide range of chemical exposures, including from automotive wastes.	Coating will not easily degrade due to chemical exposures, offering extended life, especially with regular maintenance.
UV Resistant	Coating will have extreme resistance to UV degradation.	Outdoor installations will not be compromised due to UV exposure.
Spot Repairable	The chemically-bonded nature of this coating means that each concrete section is independent of the others.	Coating is spot repairable and wear remains localized, meaning high wear areas can be addressed without the need to tear out and reinstall the entire coating system.
Salt Corrosion Immune*	Will not degrade from salt exposure	Coating will not deteriorate from salt exposure and will disallow ingress of salts into the concrete, disallowing salt corrosion of the main concrete structure.
Carbonation Corrosion Immune*	Will not experience carbonation	Coating will not degrade due to carbonation over time, and will disallow ingress of carbonic acids into the concrete, disallowing carbonation corrosion of the main concrete structure.
Non-Breathable	Provides a durable barrier to contaminants entering the concrete	Effectively seals surface against corrosive chemicals, protecting the concrete asset against degradation.
Biologically Impervious	Resists biological contamination	Disallows biological life proliferation and biological corrosion at the concrete surface.
Low Voc, High Solids (>92%),	Low VOC emissions.	CA compliant, low VOCs coating reduces emissions to the environment and to workers.

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.