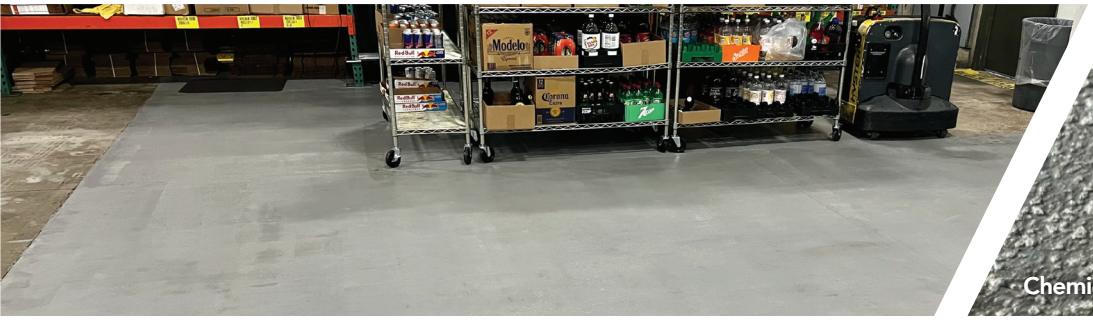
ZIRCONIA™
Ending Concrete Corrosion

BulletProof™
Product **Sheet**



BulletProof™ Concrete Coating

A two-coat TruComposite® system that chemically bonds to concrete for excellent water, chemical, and abrasion protection.

OVERVIEW

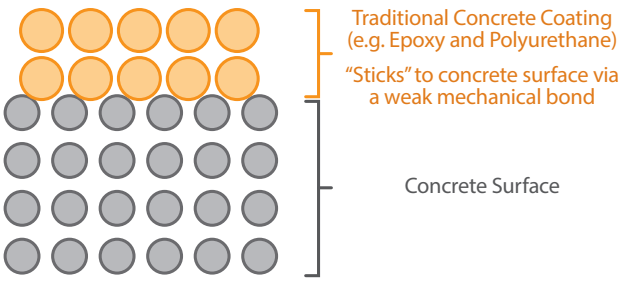
BulletProof™ is the ideal topcoat for applications where excellent chemical resistance and toughness are needed. This silane modified urethane hybrid coating chemically bonds with Zirconia's inorganic CeramycGuard™ base coat, creating a true composite coating system that brings the best of inorganic and organic coating technology into one composite system for excellent durability.

BulletProof provides superior chemical resistance, as well as providing protection from moisture and humidity as a waterproof vapor barrier. BulletProof also provides superior wear and abrasion resistance compared to traditional epoxies and urethanes on the market. Add to this, BulletProof is easy to clean and maintain and can even be spot repaired if damage is done to the surface.

When used with the CeramycGuard™ base coat, you have a composite coating system that has an inorganic base that chemically reacts or cross-links with the concrete. BulletProof directly cross-links with the CeramycGuard, giving the coating system the benefits of this advanced organic hybrid coating. The extreme crosslinking density of this system creates higher levels of chemical resistance. This composite system is not affected by freeze/thaw cycles, and cannot peel, flake, or delaminate.

The Problem

Concrete has a porous and chemically unstable surface that is vulnerable to degradation by chemicals driven into the surface by water and moisture. Traditional film-type coatings like epoxies, urethanes, and other paints, attempt to control this instability by creating a non-permanent barrier layer at the concrete's surface. These coatings are traditionally organic plastics that are unable to chemically bond with the concrete, and which only temporarily stick or grab onto concrete's surface texture to stay in place. These coatings quickly degrade and peel off, due UV sunlight vulnerability, and the inability to breathe out trapped water vapor. Then, moisture and chemicals enter the concrete causing carbonation and biological growth, leading to corrosion, cracking, rebar rusting, spalling, and eventual concrete failure.



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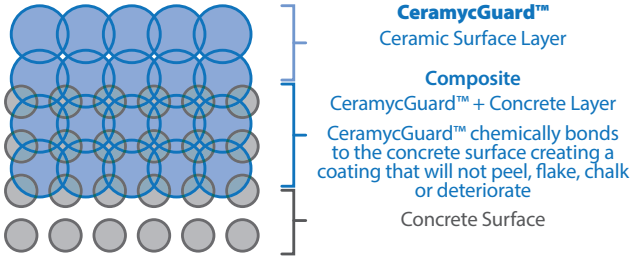
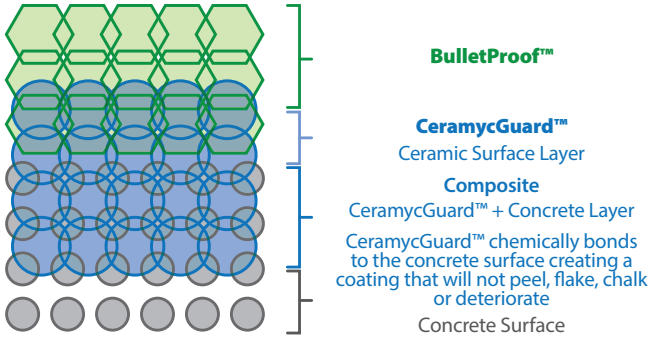
The Solution

This unique composite gives the owner the best aspects of both organic and inorganic chemistry. For instance, since this two-layer composite system is chemically bonded with the concrete, it cannot delaminate from moisture movement or freezing temperatures. Its exceptional toughness due to the wear resistance of the inorganic ceramic chemistry, mixed with the chemical resistance of the dense organic chemistry, making this coating system ideal for industrial applications. This technology strengthens, preserves, and protects concrete in a manner that cannot be achieved by other means.





Characteristics / Advantages:

- Superior impact and wear resistance
- Excellent chemical resistance (due to extreme crosslink density)
- Superior acid resistance
- Superior salt resistance (prevents ingress)
- Resistance to weathering (heat, humidity, wind-driven rain)
- Non-yellowing, UV stable protection
- Freeze-thaw resistant
- Impact resistant
- Anti-Corrosion (stabilizes concrete chemically)
- Green solvent

Biologically Impervious™ eliminates habitat, water, and oxygen for microbes. The oxidative (antimicrobial) potential of the ceramic never stops suppressing microbial life, and thus it supresses biofilm in concrete indefinitely. This is a huge benefit to food manufacturing and storage.

Sample Uses:

Food: manufacturing facilities, cold storage walls/floor/ceilings, food storage

General Construction: condominiums, parking garages, hangers, manufacturing, warehouse.

Commercial flooring such as loading docks, distribution centers, parking ramps
Infrastructure: wastewater, stormwater, bridges, dams (concrete anti-corrosion, anti-weathering)