

NEW FLOOR



OLD FLOOR



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Acidic Drink Corrosion

PROBLEM - CLIENT PERSPECTIVE:

Columbia distribution is a major distributor of alcoholic and non-alcoholic beverages, and when these liquids come in contact with concrete they eat away at the surface. They were forced to replace the concrete surrounding a product disposal area due to the slab being severely deteriorated.

To prevent this issue from happening again, Columbia decided to install a protective floor coating over the new concrete. They also wanted a floor that would be easy to clean and provide non-slip characteristics.

CAUSE - STORY, PROJECT PAST HISTORY:

Many beverage types, such as sodas and juices, can quickly eat away and chemically destabilize concrete. In this facility damaged product is stored in a staging area before disposal, but these items often leak and eat away at the concrete. As a result, this floor was continually exposed to food acids, sugars, and other contaminants that ate away the concrete. Additionally, this created ideal conditions for microbial growth which caused further corrosion. The previous surface treatment was not suitable for these exposure conditions, which led to complete concrete failure and necessitated replacing the slab.

ZIRCONIA SOLUTION

ComposiCoat BP™ Coating System

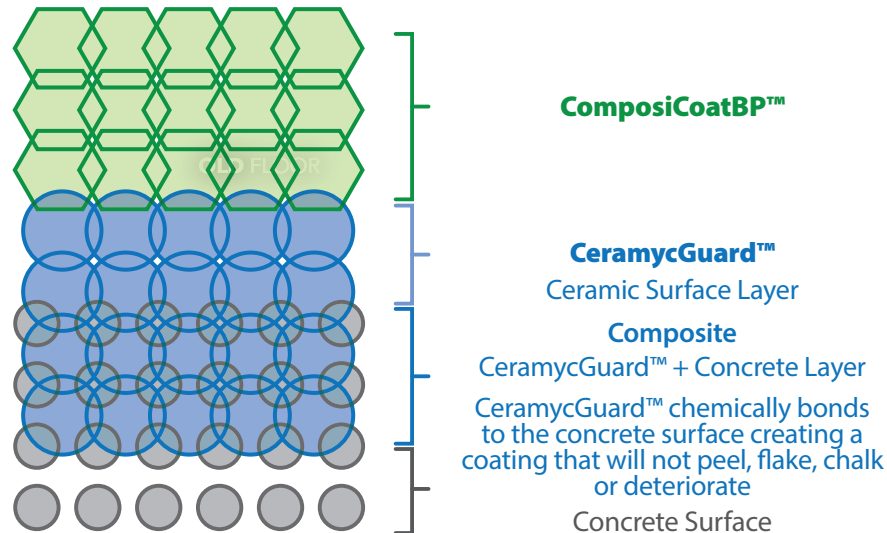
- Superior chemical resistance and extreme wear resistance
- Easy to clean, with non-slip surface
- Chemically bonded to concrete and will not disbond or peel
- Ultra-durable organic-ceramic composite surface
- Ceramic System Pore Blocker™: Densified concrete with reduced porosity and capillary void space

ADDITIONAL BENEFITS

Zirconia's ComposiCoat BP™ Coating System provides a chemically bonded, waterproof coating for concrete. This coated section of floor will no longer allow the ingress of any spilled products, microbial life, water or damaging chemicals. As such, cleaning is easier and can be done with less harsh, "greener," cleaners. Zirconia's Ceramic System Pore Blocker™ densifies the concrete and fills in capillaries and surface pores by creating new cement paste. Existing contaminants in the treated areas are purged to the surface as the creation of new cement paste pushes them out.

Continuing outcome: After months of regular use, the coating is still completely intact with no signs of wear or delamination. The concrete is free of new contamination and workers have an easy to clean, safe non-slip floor.

How it Works:



About CompositCoat™ BP™ Coating System

All TruComposite™ systems start with CeramycGuard™, a Ceramic Surface Treatment that uses alumina and zirconia silicates to renew and preserve concrete surfaces. This dense nano-ceramic polymer penetrates and atomically bonds to all available elements in the concrete, shielding the surface from the environment. CeramycGuard™ is not affected by wet/dry or freeze/thaw cycles, and will not peel, flake, chalk, or delaminate in any manner. CompositCoat BP™ is a finish coat which is applied directly over the CeramycGuard™ base layer and chemically crosslinks to form an incredibly dense final coat with superior chemical resistance and exceptional physical wear resistance. Working together with CeramycGuard™, CompositCoat BP™ creates a TruComposite™ coating system that is chemically bonded to the concrete. This means it cannot disbond or fail like traditional organic coatings like epoxies and urethanes alone.

The CompositCoat BP™ system chemically transforms porous, hard-to-clean concrete surfaces into a dense, organic-ceramic composite surface with these additional attributes:

Easy Cleaning • Zero Porosity • Superior Chemical Resistance • Extreme Wear Resistance
Anti-Stain • Anti-Attachment Color Stability • Anti-Slip • Biologically Impervious

About ZIRCONIA

Zirconia Ceramic Surface Treatments (CSTs) originated in Dr. Balaguru's laboratory over 20 years ago at Rutgers University. Since then, we have been continually developing CST technology to solve problems in infrastructure that cannot be solved by other means.