



NEW FLOOR

OLD FLOOR



NEW FLOOR

Industrial Rug Cleaning

PROBLEM - CLIENT PERSPECTIVE:

This client is rug cleaning business which uses strong detergents and high-pressure hot water as part of their cleaning process. Individually, but especially as a combination, these exposures will quickly attack and cause deterioration of any concrete asset. Epoxies and urethane coatings, while they offer chemical resistance, will quickly delaminate with continued exposure to temperature changes and pressure washing as hydrostatic pressure builds and pushes the coating off the substrate. They needed a solution that would perform over time in such a harsh environment.

CAUSE - STORY, PROJECT PAST HISTORY:

Direct pressure washing will etch away and physically erode concrete, while strong cleaning agents and harsh chemicals will absorb into and chemically destabilize it. In combination, as concrete is eroded from the pressurized water, it becomes easier for chemicals to infiltrate and as the concrete is destabilized chemically it is easier to erode with pressurized water. In effect each thing makes the concrete more vulnerable to other, creating a one-two punch where contaminants are more easily carried deeper into the concrete causing more corrosion which will cause it to break apart more and more easily. With every cycle of cleaning, the substrate is further deteriorated and left even more vulnerable than before to physical and chemical wear. In addition to contamination and corrosion from the cleaning agents, any debris, contaminants or microbial life from the cleaned carpets will find their way in and further help to corrode the concrete. This operating environment will cause film forming coatings, such as epoxies and urethanes, to quickly fail as hydrostatic pressure builds underneath, overcoming the temporary state of adhesion to the substrate. As delamination starts, pressure washing will begin to tear apart the coating, washing it away, and causing total failure.

ZIRCONIA SOLUTION

ComposiCoat XD[™] Floor Finish

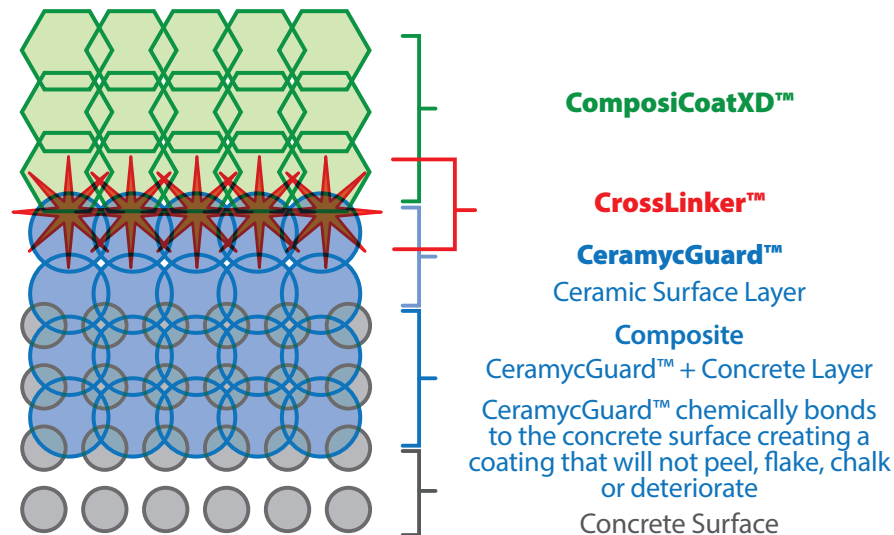
- Extremely chemical and wear resistant
- Not affected by harsh cleaning agents or contaminants from cleaned rugs
- Chemically bonded to concrete and will not disbond or peel
- Easy to clean and spray away cleaning residues
- Zirconia Ceramic System Accelerator[™] was used so ComposiCoat XD[™] Floor Finish could be placed on relatively fresh concrete

ADDITIONAL BENEFITS

The use of Zirconia's ComposiCoat XD[™] means the surface is now extremely physically and chemically wear-resistant, as well as impermeable. Washing away residues, debris and microbes from cleaned rugs is extremely easy, allowing the cleaning area to be kept free of mold and odors. Also, less harsh, "greener" cleaners can now be used, making this area more worker- and environmentally-friendly.

Continuing outcome: After years of regular use, the ComposiCoat XD[™] system has held up perfectly, with no delamination or peeling of any kind. A clean border between the coated and non-coated areas of floor is still visible as a crisp line where the coating ends.

How it Works:



About CompositCoat XD™ Floor Finish

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 XD™ is a topcoat over the CeramycGuard™ base layer, that starts with CrossLinker™ which chemically bonds to the CeramycGuard™ and provides a chemical link to the final coat of CompositCoat XD™, an ultra-durable urethane. Working together with CeramycGuard™, the CrossLinker™ and CompositCoat XD™ create 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 XD™ system chemically transforms porous, hard-to-clean concrete surfaces into a dense, organic-ceramic composite surface with these additional attributes:

Easy Cleaning • Near-Zero Porosity • Extreme Wear Resistance • Anti-Stain • Anti-Attachment
Color Stability • Anti-Slip • Breathable • 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.