



Case Study From Lythic Solutions Booth #S13007

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The Hard Wear Floor: The Right Gloss At the Right Cost

A Washington state high-tech plant needed a floor that could stand up to abuse, was easy to clean, was cost effective to make, and looked good enough for entertaining guests. They found it all in a Lythic™ Solutions HardWear™ floor.

Korry Electronics has a 216,000 sf single-story building in Everett, WA, used for assembly of high-tech avionics equipment. It has strict operating conditions, such as humidity controlled at 78%, and high attention to cleanliness. It is also frequently visited by customers. The company wanted a glossy, high-appearance floor with good reflectivity, easy maintenance, and a long service life.

Acrylic flooring was considered not durable enough. Polished concrete offered the durability, appearance and easy maintenance they sought, but it was beyond their budget.

A near-lookalike alternative to polished concrete was selected instead: the Lythic Solutions HardWear floor. This finishing method creates an exposed concrete floor that has all the performance of a polished floor without the time and expense of diamond grinding. Instead, it uses a special high-performance densifier that allows the concrete to be burnished to a near-polish gloss.

The existing floor in Korry's facility was a favorable substrate for the process. It was 6000 psi concrete, mechanically consolidated and power-troweled. The contractor, Sustainable Flooring Solutions, didn't grind the floor at all. They simply cleaned it with sanding screens mounted on a high-speed burnisher.

Then, Lythic™ Densifier with colloidal silica was applied. Lythic Densifier bonds nano-particles of virtually pure silica to the concrete. These particles are on the order of 5 nanometers, and they fill in the surface pores, closing up and hardening the concrete surface. Since colloidal silica readily bonds to itself, a strong silica layer builds up.

After initial densification, the floor was cleaned with an autoscrubber to remove any excess, unbonded silica.

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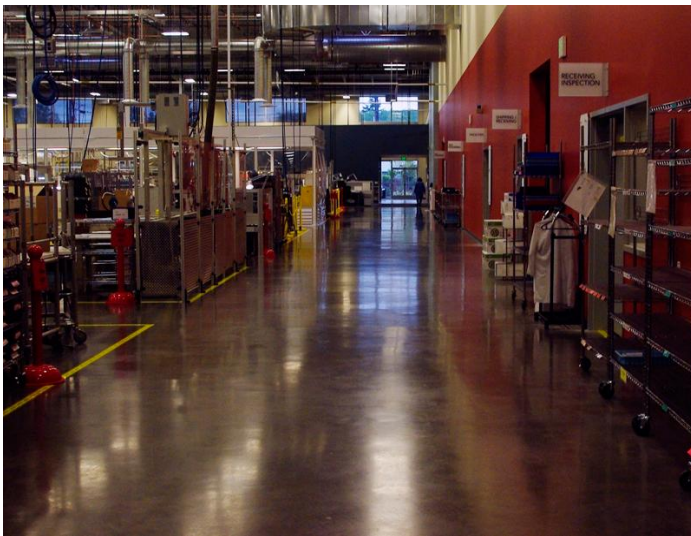


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A second densification treatment was applied using Lythic™ XL Densifier. Lythic XL is also based on colloidal silica, but the particles are much bigger – approximately 40 nanometers. The XL silica bonds to the prior densifier application, building up greater silica content at the surface.

When the XL application is burnished with a black stripper pad pad, the gloss appears. Korry’s floor is almost as glossy as a full diamond polish.

The surface is then protected with Lythic™ Protector, or Lythic™ SPD™ Protector. These high-performance stain protectors add more colloidal silica, further enhancing the surface.



Finally, the protector is burnished again, which both speeds up curing and improves the gloss.

Korry Electronics saved about \$120,000 by installing a HardWear floor instead of diamond polishing. After 18 months in operation, the floor still has good reflectivity despite having been cleaned with a very aggressive street-sweeper type brush machine.

The Korry Electronics assembly facility has 200,000 sf of exposed concrete floor, cost-effectively finished to a very reflective gloss without diamond grinding. Instead, they used the Lythic Solutions HardWear floor system with specialized Lythic XL Densifier to achieve the gloss without the grind.

Performance-wise, the owner is extremely pleased with the floor. “It’s turned out to be a very tough floor,” comments

Steve Sullivan, Maintenance Facilities Technician. “We drive tuggers” – stockroom trains of five trailers with hard wheels – “and forklifts across it; we slide all sorts of things across that floor. It holds up well.”

Custodian Allen Leben adds, “It’s beautiful.”

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About Lythic Solutions: Lythic Solutions, Inc. (www.lythic.net) is a concrete technology company formed by veteran concrete polishing professionals. The company is dedicated to bringing to market advanced products for concrete polishing and other concrete finishing applications.

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