Quantum Chemical

PRECIDIUM™ PROTECTIVE COATINGS Innovation It's all in the Chemistry!

CASE STUDY

PROJECT

The Edmonton Valley Zoo Seal Habitat

CONTRACTOR

PCL Construction Management, Inc.

OVERVIEW

The Edmonton Valley Zoo Seal Habitat Project was born of a “failure”. An inexperienced applicator with unsuitable products had finished the project, but the completed result was unacceptable. Initially, the applicator over-blasted the concrete and attempted to fill the heavily blasted area by spraying polyurea without any surface filling of the subsequent voids. The result was a non-waterproof liner that was mostly runs and had the appearance of Swiss cheese. The attempted “fix” included troweling polyurethane caulk membrane over the holes in hopes of filling the voids; however, the caulk did not adhere properly to the polyurea that had been utilized. The general contractor dismissed the polyurea applicator and removed the coating using a combination of scarification, bush hammering and hand-scraping, which was an extremely costly endeavor.

PRODUCT REQUIREMENTS and INSTALLATION

By the time Quantum's coating expert became involved in this project, the general contractor had already removed the original polyurea liner. The concrete was a mess, requiring extensive leveling. First, the **Precidium™ 2100 Repair** with a thickening agent was hand-trowelled to vertical surfaces to close all voids and provide a smooth surface for the liner. The floors received three coats of **Precidium™ 2100 Repair** applied by squeegee to fill the uneven surface. All surfaces were then sprayed with **Precidium™ 550D** to provide an overall system thickness exceeding 100 mils.

The floors also received a splatter texture coat to provide a non-slip surface. The system was finished off with a rolled coat **of Precidium™ LS 1150D** to provide the final color coat and UV resistance.

PROPERTIES

100% solids high-performance two-component polyurea elastomer ideally suited for decking and flooring applications where self-levelling properties are advantageous. It has excellent resistance to chemicals, coupled with superior physical properties.

Volume Solids	100%
VOC's	Zero
Mix Ratio	2:1 (Volume) (Resin:Iso)
Pot Life	20 minutes
Touch Dry	90-120 minutes
Tack Free	120-240 minutes
Re-coat	up to 4 hours

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Test Description	Test Method	Result
Durometer Hardness	ASTM D2240	43D
Tensile Strength (Die C)	ASTM D412	3138 psi
Elongation (Die C)	ASTM D412	575%
Tear Strength (Die C)	ASTM D624	356 pli
Abrasion Resistance	ASTM D4060	1000 cycles/0 mg loss

FINAL ANALYSIS

"The project was ultimately a success. The finish of the Quantum Precidium™ System was exactly what the client required. The only repair issue that we had to deal with was after an overhead radiant electric heater exploded, dropping pieces of hot element onto a portion of the floor. These areas were repaired and the Precidium™ LS-1150D Top Coat was reapplied. The repair was very easy."

~ Demetrius Bazos, Applicator

*The seal pups glide effortlessly across their new **Precidium™** coated floors.*

"Polyurea is an amazing product; it is extremely durable and waterproof. It is virtually solvent free and dries almost instantly. But in the hands of the wrong applicator, it can become a contractor's or client's biggest and most expensive nightmare. Cheaper is not always better when specifying such technically challenging products." ~ Demetrius Bazos, Applicator

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