



**EPOXYTEC™**

## **PUMP STATION UPGRADES USING EPOXYTEC'S UME SYSTEM**

### **THE PROBLEM**

Miami-Dade County, located in South Florida, is the largest county in the state. With a consistently growing population, it's no surprise that the county is taking measures to keep up with the influx of people and booming growth. The upgrade to Pump Station 106, located in Hialeah, FL, exemplifies some of the county's proactive measures to upgrade existing infrastructure to meet the population's current and future demands. This pump station is located in a residential area surrounded by new apartment complexes and existing homes.

When it came to lining and protecting the new structure, Epoxytec's Urethane Modified Epoxy (UME) was specified by the county. This system has been specified in Miami-Dade County for over two decades. It is a proven system with a strong reputation for application simplicity and out-performance in substrate repair and protection. Applied by Champion, an Epoxytec Certified Contractor and a leader in the industrial specialty services segment, ensured this project's success. Champion delivers value and high-performance service while maintaining the highest degree of integrity and safety.

### **PRODUCTS THAT OUT-PERFORM**

Epoxytec's Urethane-Modified-Epoxy (UME) system consists of a hybrid epoxy cementitious underlayment for repairing concrete and a hybrid epoxy top-coat composite system to line and protect the substrate.

The underlayment, Mortartec Ceramico, is a highly advanced, formulated epoxy blend. It incorporates a cutting-edge epoxide technology with proprietary engineered curing agents and a specific balance of Portland cement, hardened ceramics, graded silica aggregate, and synthetic fibers. One of the most coveted mortars

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### **Featured Products**

**Mortartec Ceramico**

**Uroflex**



### **Project Information**

**Location**

Miami, FL

**Completion Date**

Fall 2018

**Structure**

Pump Station

**Owner**

Miami-Dade County

**Engineer**

Kiewit

**Applicator**

Champion





## **PUMP STATION UPGRADES USING EPOXYTEC's UME SYSTEM (cont.).**

in the industrial market today, Mortartec Ceramico results in a smooth mortar application.

Uroflex provides the advantages of a polyurethane and an epoxy together as one technology, which allows it to provide the superior adhesion, tolerance, and strength of an epoxy combined with the flexibility (38% tensile elongation), gloss, and impact resistance of a urethane. The epoxy resin incorporates novolac, enhancing its chemical resistance and crosslinking. This hybrid technology is unique and proprietary, allowing a coating with out-performing protective corrosion resistance. Uroflex is formulated "green," which means it is environmentally friendly and 100% solid (no VOCs, no solvent). The Uroflex coating system is easy to apply by spray, brush, or roller. It conveniently mixes in a 1-to-1 ratio by volume. Uroflex self-levels, and it can be applied up to 65 mils per coat. For long-term maintainability, the Uroflex system ties back into itself indefinitely, with no need for re-blasting or abrasion.

### **THE APPLICATION**

To begin, proper surface preparation was completed. The substrate was cleaned and abraded to produce a sound concrete surface to provide a strong bond between the coating and the substrate. Hydroblasting was used to remove the unknown existing coating to meet NACE Standard No. 5/SSPC-SP12.

Epoxytec's Mortartec Ceramico was applied by trowel as the repair material on the substrate. It was used for resurfacing, patching, and filling voids and bug holes on the concrete substrate. The material was mixed per the manufacture's specifications and applied by trowel. This process, as well as the entire project application, was overseen by Dan Gibbens, Project Manager for Champion. "Mortartec Ceramico was applied without any problems. It was cut and dry, nice and easy," Gibbens says. This process was completed in roughly one week.

Once the resurfacing application was complete, two coats of Uroflex were spray-applied using a Graco x60 with a 525 tip. Epoxytec provides Uroflex in a two-coat color system to assist with ease of application. Applying Uroflex red first followed by Uroflex beige as a second coat ensured that no areas were inadvertently missed since the red stood out, allowing for an easy visual.

"Epoxytec's Uroflex is one of the best products we've ever used," says Champion's Project Foreman.

### **FINAL LOOK**

All parties involved with this application were satisfied with the outcome. "The project was finished on time with no major issues" stated Gibbens. Ignacio Arias, Epoxytec's representative, completed inspections throughout the process to verify the excellent application procedures completed by Champion. Epoxytec's Uroflex as applied by Champion's expert crew will ensure a long service life for Hialeah Pump Station 106. Completion of this project marked another successful Miami-Dade application for Epoxytec and Champion.

