FluoroGrip®

Fluoropolymer Linings and Coatings

Case History: Loading Pad - Secondary Containment

The following study illustrates the use of Integument's new FluoroGrip "peel-and-stick" fluoropolymer films and epoxy-novolac toppings to provide protection of a concrete secondary containment area of the loading pad at Olin's Chlor-Alkali Products plant in Niagara Falls, NY.

With headquarters in Cleveland, Tennessee, Olin's Chlor-Alkali Products is the leading producer of chlorine and caustic soda in the eastern United States and one of the largest in North America. The company's Niagara Falls plant produces chlorine, caustic soda, hydrogen, sodium hypochlorite, hydrochloric acid and spend sulfuric acid. The company's products are important ingredients in a wide variety of items from household cleaning products to paper and plastics.

Loading Pad

The Problem

- Concrete loading pad exposed to sodium hypochlorite (main ingredient of household bleach).
- Tanker trucks use loading pad daily to deliver sodium hypochlorite. The surface protection on the secondary containment system has to withstand not only potential spills, but also the daily wear and tear of an industrial environment.
- The loading pad area is approximately 40' x 15' including trenches for secondary containment..
- Installation had to be coordinated to minimize disruption of product deliveries.

The FluoroGrip Engineered Solution

Spill a little chlorine bleach on dark clothing and the liquid will immediately make its mark. Now imagine the effect a spill of sodium hypochlorite — the main ingredient of household bleach — might have on a surface exposed to the liquid day in and day out. That provides an idea of the level of protection Olin's Chlor-Alkali Products was seeking for a loading pad at the company's Niagara Falls, NY plant. After using conventional coatings on the concrete secondary containment area of the loading pad, Chlor-Alkali Products turned to Integument Technologies and its FluoroGrip® fluoropolymer lining systems for a better method of surface protection.

Tanker trucks come in and out of the loading pad on a daily basis at Olin's 65-acre site in Niagara Falls, delivering sodium hypochlorite to customers throughout the region. The surface protection on the secondary containment system has to withstand not only potential spills, but also the daily wear and tear of an industrial environment.

Integument's engineered fluoropolymer systems of linings, films and coatings, offer an ideal alternative to traditional coatings and linings that do not fare well upon combined exposure to harsh chemicals, abrasion, weather and other factors. FluoroGrip® products are produced with an innovative plasma surface modification that permits thin films and sheets of fluoropolymer materials to be installed for surface protection. The process creates a chemical covalent bond between the fluoropolymer lining material and adhesive. The bond is permanent enabling it to be used in applications where no conventional adhesive sheet or film product can be used. The covalent bond withstands a wide variety of stresses such as extreme temperature cycling, UV, and a wide range of aggressive chemicals.

Sodium Hypochlorite Storage Tank

Integument

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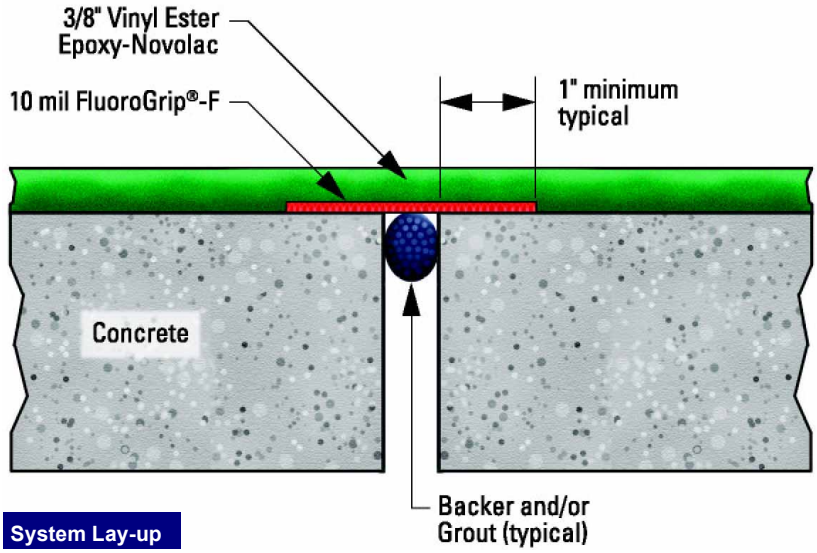
Case History: Loading Pad continued...

System Benefits

- **Easy Installation & Minimal downtime & disruptions** – 100% Solids—No Solvents.
- **Cost effective** – From simple installation requirements, proven performance to reduce maintenance and repair costs.
- **Performance** –
  - — Withstands mechanical abuse — Snowplows!
  - — Withstands outdoor exposure
  - — Prevents attack from sodium hypochlorite
  - — Teflon® joint tape for flexible joints/cracks without sacrificing chemical resistance

Completed Traffic Topping



System Lay-up

Teflon® is a registered trademark of the Dupont Company
Halar® is a registered trademark of Ausimont-Solvay
Kynar® is a registered trademark of Ato-Finatechnical

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