

NANO-CLEAR INDUSTRIAL COATING FOR OXIDIZED WATER SLIDES



The Springs Aquatic Center Kansas City, MO

Customer:

Kansas City Parks & Recreation

Project:

Penetrate/protect oxidized fiberglass and enhance the color on the exterior surfaces of the water slides in The Springs Aquatic Center.

Project Location:

Kansas City, MO

Applicator:

Dayco Painting Inc.
Grandview, MO.
816-761-3353

<https://www.daycopainting.com>



Coating Formulation:

Nano-Clear Industrial Coating

Application System:

Roller and brush.

Date of Application:

June 2019

After NCI



PROJECT OVERVIEW:

Nano-Clear Industrial Coating (NCI) was applied to the oxidized fiberglass exteriors of the water slides at The Springs Aquatic Center in Kansas City, MO. The fiberglass on the water slide had become oxidized and the color had faded due to UV and degraded from chemicals in the water.

After seeing the performance of **NCI** on other water slides and through on-site demonstrations, The Parks & Recreation Department decided to use **NCI** on the water slides to extend the service life of the fiberglass and enhance the color of the fiberglass instead of re-painting. The **NCI** penetrated and fortified the existing fiberglass creating a “tough” monolithic protective coating on the exterior surface of the water slide that will keep the waterslides looking new for at least 10 more years.

The **Nano-Clear** solution saved the city an estimated 20% over the total costs of re-painting *and* eliminated at least one re-painting maintenance cycle – which more than pays for the cost of **Nano-Clear**.

Before NCI



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CURRENT SITUATION:

The water slides at The Springs suffered the same problems as do all outdoor fiberglass water slides – oxidation and color fading from continuous exposure to UV. They are also degraded from the chemicals in the pool water. Along with degradation, mineral deposits form on the fiberglass making routine cleaning increasingly difficult.

The approximate cost to purchase one water slide of the size that are in The Springs may be \$100,000 so it is important to maximize the service life of the city's investment.

ISUSA SOLUTION:

The elements would eventually degrade the fiberglass to a point where repair or replacement would be required. This would be the most expensive option.

The Parks & Recreation Department decided to coat the water slide exterior with **Nano-Clear** to penetrate and fortify the fiberglass protecting it from UV and pool chemicals. In addition, the **Nano-Clear** will enhance the fiberglass color.

Nano-Clear Industrial Coating is a clear, aliphatic (UV stable), polyurethane/polyurea hybrid topcoat formulated to work with existing oxidized fiberglass and oxidized paint to create a long lasting protective coating *system*, eliminating the need for costly re-painting.

The substrate preparation requirements are the same for **Nano-Clear** and paint.

No primer is required for fiberglass with **Nano-Clear**.

No color matching or having several colors of material is required with **Nano-Clear** – one product coats all the substrates and enhances the colors on those surfaces.

Nano-Clear is a one component formulation – consistent results. Paints may be plural component formulations so there is a probability that mixing errors will occur that can result in variations in paint coating performance.

APPLICATION:

Contractor: Dayco Painting, Inc., Grandview, MO.

Step 1: Cleaning.

The exterior of the water slide was cleaned with a biodegradable and phosphate free cleaner (e.g. TSP-PF). The surface of the fiberglass was sprayed with a pressure washer and broom brushed to work the dirt and contaminants off the fiberglass surface. Then the surface was rinsed thoroughly to ensure all the detergent was removed.

Step 2: After cleaning there were some mineral deposits/stains on the fiberglass. These were removed by sanding and using a mineral deposit chemical remover (e.g. CLR – a part of the EPA's Safer Choice Program). Acetone was used to clean the sanded areas, remove the remaining stains and clean all the remaining exterior fiberglass surface.

Step 3: The Nano-Clear was applied to the prepared fiberglass using brushes for the bolted flange sections and Purdy Ultra Finish rollers for the remaining area of each fiberglass section. The addition of a rolling additive was added to the **NCI** to eliminate any bubbles that may form using a roller. NOTE: Application of **NCI** may also be made by HVLP, air-assisted or airless spray equipment.

Each section of the water slide received two cross-hatched, wet-on-wet coats of **NCI**...allowing approximately 5-8 minutes in between coats. This ensures there is enough Nano-Clear material to penetrate the oxidized fiberglass and to form a glossy, monolithic coating on top of the fiberglass surface for long term protection.

The application of two wet-on-wet coats of **NCI** during the same application session eliminates the time required having to return many hours later or the next day to apply a second coat of paint.

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After NCI



Before NCI



After NCI



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A small investment of money made a remarkable difference!

The Springs Aquatic Center water slides are now protected from degradation and fading, making them a show piece for the Kansas City Park & Recreation Department.

Repainting would have put an aromatic paint on top of the fiberglass and that paint would have oxidized and faded in just a few years, requiring additional maintenance repainting cycles – expensive.

Nano-Clear Industrial Coating:

- An aliphatic formulation – excellent UV stability, no oxidation
- Loaded with two different UV absorbers – protects the fiberglass colors from fading
- 3X the cross-link density than alternative topcoats – very “tough” physical properties
- Makes cleaning fiberglass much easier

Nano-Clear will eliminate *at least one* repainting maintenance cycle. That more than pays for the cost of Nano-Clear.

Money was saved and the service life of capital assets was extended because the Park & Recreation Department embraced new coating technology.

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COATINGS & ELASTOMERIC LININGS
to help industrial customers
protect their assets from destructive elements.**