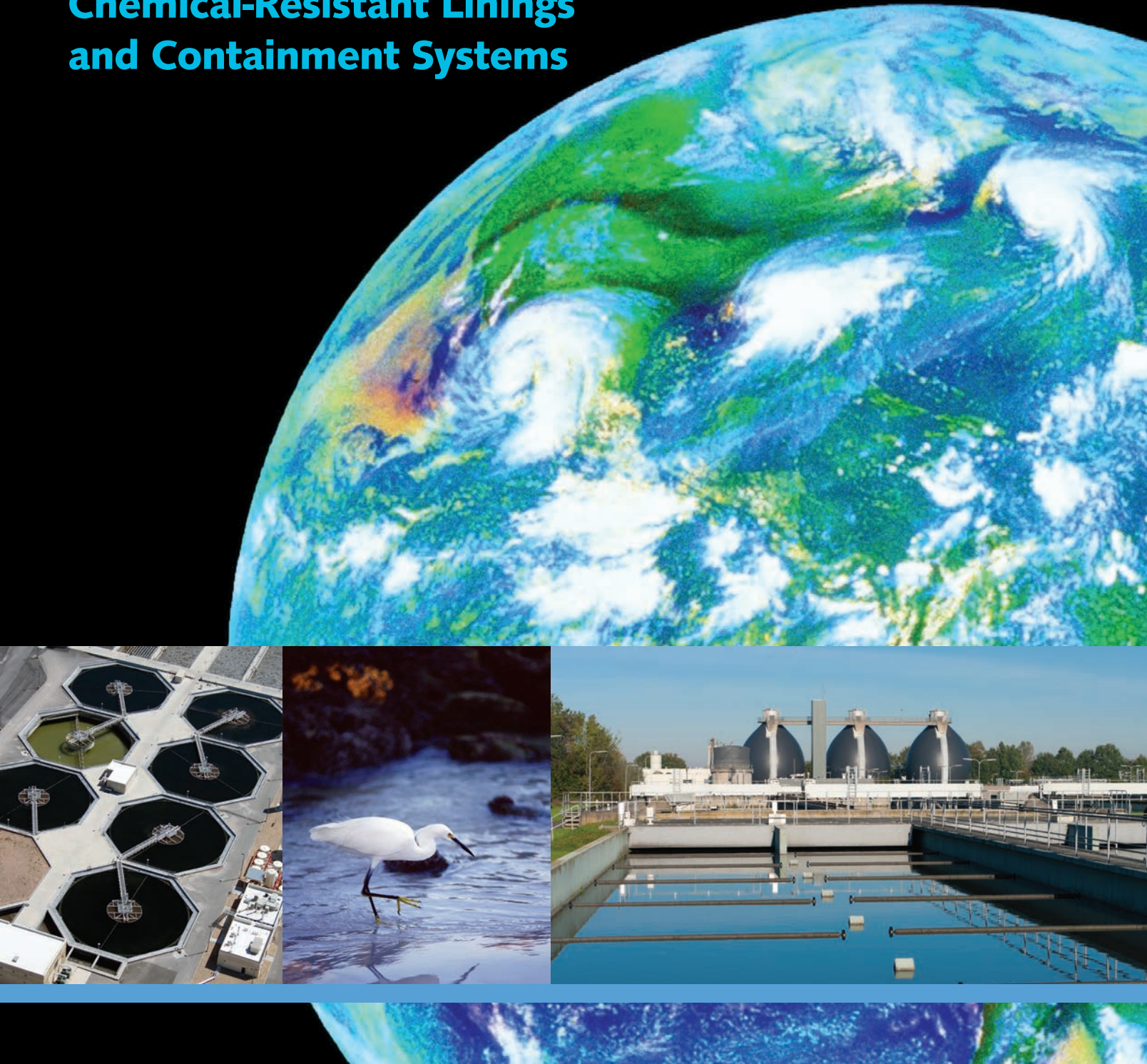


Water Treatment

Chemical-Resistant Linings and Containment Systems



Dudick inc.

The world knows our name

We're committed to **clean water**

Water is a precious commodity. Treating and storing it effectively to make sure it's 100 percent safe for consumption and other uses requires strict adherence to rigorous standards.

Corrosion, deterioration and abuse of materials can threaten the integrity of water treatment and storage facilities. The concrete structures of plants are under constant attack from abrasion; freezing-and-thawing cycles; chloride attack; wet-and-dry cycles; and strong, concentrated chemicals.

Over time, these threats can compromise facility operations and must be addressed on a regular basis to ensure structural integrity, repair and rehabilitation.

Dudick has developed innovative, high-performance coatings and linings that effectively protect water treatment and storage facilities against these threats. Our proven applications are ideal for a host of components, including collections systems, digesters, clarifiers, headworks and secondary-containment units. For potable water contact surfaces, we offer NSF Std. 61-certified coatings that protect facility integrity to ensure consumer safety.

Customer needs are always Dudick's primary focus. From the smallest rural city water-treatment plant to the largest UV disinfection facility for New York City and the world's largest filtration plant for the greater Chicago area, Dudick provides high-performance linings and coatings that meet – and surpass – rigorous standards.

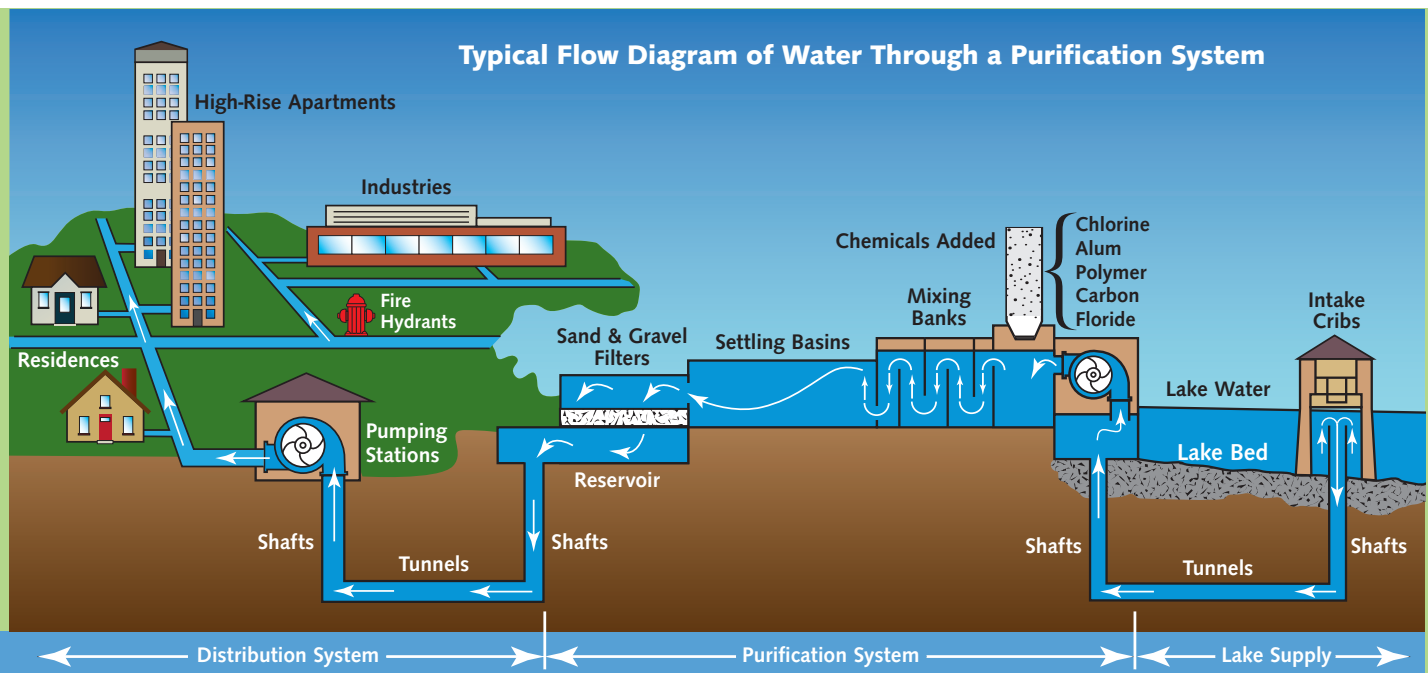
Dudick has more than 43 years of experience developing innovative and effective chemical-resistant coatings and linings. Our expertise has made us the recognized global leader in containment systems for all areas of water treatment and storage facilities.

Dudick supplies coatings for the following **types of equipment** and facilities:

Secondary chemical containment
Trenches and sumps
Digesters and clarifiers
Grit chambers

Sand filters
Settling mixing basins
Membrane technology pits
Ultraviolet disinfection facilities

Desalination facilities
Reverse osmosis facilities
Ozonation facilities





Dudick has systems for the repair and coating of most concrete surfaces, whether old or new. Even if years of spills have cracked and corroded concrete pits and floors, our fast-setting (hydrating) cementitious grout can repair and resurface these spalled areas, preparing them to accept a coating within 24 hours. Used on horizontal or vertical surfaces, C-Grout was among the first cementitious grouts that fully hydrates within 24 hours and is ready to accept moisture-sensitive coatings.

Dudick can train your local contractor to perform fast and durable repairs to your existing surfaces with minimal downtime.

Typical applications for Dudick products include:

- **Hypochlorite Storage Tanks** – Lined steel vessels with Protecto-Glass 800
- **Truck Unload Areas** – Lined with Protecto-Line or Protecto-Flex systems for maximum durability, crack bridging and impact resistance
- **Grit Chambers and Channels** – Repair using C-Grout cementitious grout followed by Protecto-Coat PS flexible polysulfide sprayable coating
- **Containment Dikes** – Protecto-Flex provides maximum crack bridging and great resistance to water and chemical treatment splash and spill.
- **Concrete Pits/Digester Ceilings** – Repair with C-Grout as above and then protect with Protecto-Line for immersion and Protecto-Coat PS for fumes/vapor protection.

Dudick has worked on some of the largest water-treatment facilities in the world.

James W. Jardine Water purification plant in Chicago Illinois

The James W. Jardine Water Purification Plant in Chicago is advertised as the largest water-treatment facility in the world. It processes nearly one billion gallons of water daily, providing potable water to nearly five million consumers in the city of Chicago and its outlying suburbs every day.

Dudick furnished this massive water purification plant with flexibilized, reinforced linings systems, in full compliance with NSF 61 specifications, to repair cracked concrete in their potable water day tanks that were more than 50 years old. The city of Chicago and its team of consulting engineers selected Dudick because of our history and proven track record in crack-bridging technology.

Catskill and Delaware Ultraviolet Light Disinfection Facility

The Catskill and Delaware Ultraviolet Light Disinfection Facility in Mount Pleasant, New York, is the nation's largest ultraviolet water disinfection facility. Located in Mount Pleasant, New York, it processes nearly two billion gallons of water every day from the Catskill and Delaware water systems. These two systems supply more than 90 percent of New York City's drinking water.

Dudick furnished all lining and coating materials for all chemical containment areas in this plant. The city of New York, along with their consulting engineers, chose us for this important assignment because of our proven performance and supply service for this fast-track, mission-critical project.

City of Phoenix water-treatment plants

Phoenix and its consulting engineering firm selected Dudick to manufacture the coating for the city's first new water-treatment plant. The facility performed successfully, meeting all needs and requirements. In an effort to reduce costs on additional plants, however, the city opted to use "or equal" coatings, valves and other components. Their performance was less than satisfactory in every aspect, and Dudick was brought in to evaluate the concrete damage caused by leaking pumps and failed coatings.

Our expert field technicians recommended ultra-high-pressure water jetting to remove the existing "or equal" coatings in order not to damage any existing equipment or create a hazardous environment. We were also asked to train three contractors on the proper installation of our coating for the re-lining process to enable them to provide accurate and competitive bids. Dudick then supervised the corrective procedure to ensure the job was done right.



Protecto-Flex

Guaranteed 100 mils crack bridging

Effective secondary containment protection requires 110% guaranteed volume. It's critical in harsh and demanding environments, such as chemical plants, chemical processing, water-treatment plants, pharmaceutical and industrial processing. Cracking and corrosion present major problems, however.

Our **Protecto-Flex** solves both these problems. A great deal of research, technology and science went into developing this exclusive and innovative protective state-of-the-art sealing system.

The unique composition of **Protecto-Flex** forges different polymers together, both chemically and mechanically, bonding them to each other and to concrete. The result is that **Protecto-Flex** is an elastomeric polymer that bonds to concrete and reduces the risk of concrete cracks, reflecting or mirroring through the coating topping.

The basic layers for all **Protecto-Flex** systems are identical and consist of a primer, basecoat, reinforcement and saturant. These common layers comprise 90% of the **Protecto-Flex** System. The various topcoats represent 10% of the system. Since the basic layers are common to all, storing material for several different systems requires storing ONLY smaller quantities of the various topcoat materials.

Protecto-Flex's topcoat, or chemical barrier, is what makes it so different. Once it's applied, the different polymers are fused, or bonded, with the chemical topcoat barrier to provide the crack-bridging and chemical resistance required.

When applied to cracks, the unique physical properties of **Protecto-Flex** provide the flexibility and tensile strength to absorb the stress of crack movement.

Protecto-Flex General Properties

Primer 67 is designed to tolerate a residual moisture within the concrete and deeply penetrate the surface to provide the "wetting out" required for good bonding.

Primer 67C is designed for applications on concrete where spark testing is required or specified.

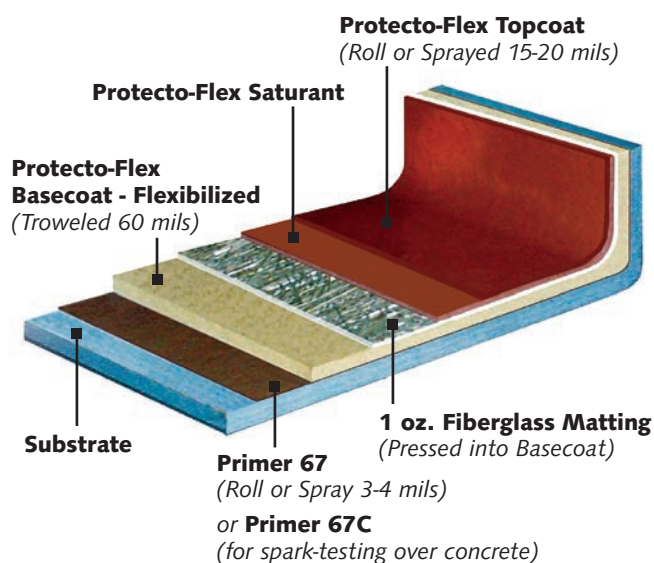
Basecoat: Protecto-Flex uses flexibilized epoxy resin and silica fillers to reduce the coefficient of expansion and provide a thixotropic base on which to embed the reinforcement.

Reinforcement: Chopped-strand fiberglass mat is used to help bridge small surface cracks and provide additional flexural strength. It is applied to the wet basecoat and becomes an integral part of it, acting much the same as a reinforcing bar does in concrete.

Saturant: Flexibilized epoxy resin is used to wet out and embed the fiberglass reinforcement, thus providing a mechanical and chemical bond to the basecoat.

Topcoats: Consists of epoxy, novolac epoxy binders, vinyl esters and carbon/graphite-filled systems incorporating flake fillers for high chemical resistance and the lowest permeation rates possible.

(Identical installation layers for all systems. Variation with different topcoats used for specific chemical exposures.)



Complementary products for every job

Primers

Primer 67/67C

Moisture-tolerant 100% solids zero VOC epoxy primer with optional conductive properties

Primer 67DTO

Moisture-tolerant, 100% solids zero VOC low-odor epoxy primer for enhancing the adhesion of toppings, coatings and lining to oil-contaminated concrete substrates

Caulks

Caulk 100XT

Fluro-elastomer, two-component caulk for high-end chemical resistance to 98% sulfuric, HCl, and solvents

Caulk 139

100% solids, pourable two-component flexible epoxy control-and-construction joint filler with broad chemical resistance and 50% elongation

Caulk 149

100% solids, trowelable, two-component polysulfide caulk with 500% elongation

Concrete Repair

C-Grout

Fast-setting 100% cementitious grout for fast, economical repairs to spalled and damaged concrete substrates. C-Grout can be ready to receive a coating or lining eight hours after placement.

Scratch-Coats

Epoxy or vinyl-ester based putties to repair small defects, such as honeycombing and bug holes, prior to coating or lining applications. Scratch-Coats are fast setting and compatible with all Dudick systems.

Shock-Crete

Shock-Crete is a signature product and a real workhorse for concrete repair and dealing with damp concrete substrates. It's a heavy-duty urethane cement product designed to repair concrete damage, such as honeycombing, spalled concrete, eroded concrete and corroded concrete, and can be used as a water-vapor mitigation system, as a stand-alone protection system or under all Dudick systems.



*High Performance Seamless
Wall and Floor Systems*



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Our Commitment to You

Service. Service. And more service.

That's the commitment of our Dudick team – and the secret to our success – for clients all over the world.

Our job isn't done until our containment system is fully installed and our customers are totally satisfied. No excuses. No compromises. We're not satisfied until our customers are satisfied. Period.

Our products are state-of-the-art with exceptional durability. We have more than four decades of experience under our belt, and more than 115 years of combined installation experience.

A 100% commitment to service and quality. This is our pledge to you.

The Dudick Team

