



**Dudick inc.**

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**PROTECTO-FLEX 100XT**

**TROWEL APPLIED, GLASS  
REINFORCED, EPOXY LINING  
WITH NOVOLAC EPOXY TOPCOAT  
100-110 MILS (2.2-2.4 mm)**

**FEATURES**

State of Florida:  
Secondary Containment Approval EQ-510  
Meets all VOC Requirements  
Can be Seeded for Anti-Skid.  
Bridges Surface Cracks in Concrete  
Flexible System

**RECOMMENDED APPLICATIONS**

Secondary Containment	Storage Tanks
Structural Steel	Pump Housings
Floors (Spillage)	Chemical Labs

**CHEMICAL RESISTANCE**

Inorganic Acids	Oils
Alkali Solutions	Solvents
Salts	

**COLORS:** Color Chart available upon request.

**TEMPERATURE LIMITS**

Immersion up to 130°F  
Splash & Spill up to 180°F

**PHYSICAL PROPERTIES**

Compressive Strength ASTM C-579	6,000 PSI
Tensile Strength ASTM C-307	4,500-5,000 PSI
Tensile Elongation ASTM C-307	12-15%
Shore D Hardness ASTM D-2240	70-75
Tensile Bond Strength ASTM D-4541	Cohesive failure of concrete

**SPECIFICATIONS**

**Protecto-Flex 100XT** shall be an epoxy lining consisting of a 1/16” trowel applied basecoat, one layer of saturated fiberglass mat reinforcement, and a flake filled epoxy topcoat as manufactured by Dudick, Inc. and applied in accordance with the manufacturer’s recommended practices.

**THE PROTECTO-FLEX 100XT SYSTEM**

**Protecto-Flex 100XT** uses a moisture tolerant primer and 100-110 mils of fiberglass reinforced, silica filled epoxy to protect concrete substrates. The added flexibility adds strength to bridge small surface cracks and increase resistance to thermal shock.

**Primer 67** is designed to tolerate 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 100XT** 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 strength in tension. 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.

**Topcoat:** The novolac epoxy binder and overlapping flake fillers in **Protecto-Flex 100XT Topcoat** provides the low permeability, high film integrity, and excellent

chemical resistance required for prolonged substrate protection.

**ESTIMATING QUANTITIES AND ORDER BILL OF MATERIAL**

APPROXIMATE SQUARE FEET PER GALLON	
<b>CONCRETE</b>	
PRIMER 67	150-200 ft. <sup>2</sup>
PRIMER 67C	100-150 ft. <sup>2</sup>
<b>PROTECTO-FLEX 100XT</b>	
Basecoat & Saturant	25 ft. <sup>2</sup>
G-1 Filler	.5 lb./ ft. <sup>2</sup>
Reinforcement	Area + 10%
Topcoat	70-80 ft. <sup>2</sup>
S-10 Solvent	500 ft. <sup>2</sup>

\*Quantities shown are for estimating purposes only. Actual field usage may vary.

**APPLICATION INSTRUCTIONS**

**SURFACE PREPARATION**

**Concrete:** Concrete must be prepared mechanically to remove surface laitance. Oils, grease or other contaminant must be removed prior to surface preparation. Concrete must be free of curing compounds and form release agents. Surface texture should be similar to 40-60 grit sandpaper or the visual standard, CSP-5 from the International Concrete Repair Institute **with exposed pea gravel**. The prepared surface should have a minimum tensile strength of 250 PSI per ASTM D-4541.

All concrete substrates must be checked for moisture prior to product application using the Plastic Sheet Test, ASTM D-4263.

Additional surface preparation will be required if a 40-60 grit texture **with exposed pea gravel** is not achieved and the surface laitance not completely removed with the first mechanical preparation procedure.

Mechanical preparation removes laitance, exposing honeycombs or voids beneath the surface which must be filled with **Scratch Coat 300**. (Refer to separate product bulletin.)

**APPLICATION SPECIFICATIONS**

Substrate temperature of concrete must be between 50°F and 110°F. Relative humidity must not exceed 90%.

Substrate temperature must be 5°F above the Dew Point.

**PRIMER 67/67C MIX RATIOS (BY VOLUME)**

Primer 67	Component A	1 gallon
Primer 67	Component B	1 gallon
Primer 67C	Component A	1 gallon
Primer 67C	Component B	29 fl. oz.

**Important: Primer 67C Component A** must be mechanically mixed for 1-2 minutes prior to adding the correct amount of **Component B**.

**Primer 67C** must be roller applied. Use brush application for small touch-up or repair work only.

**PRIMER 67/67C POT LIFE**

	Primer 67	Primer 67C
Temperature	Pot Life	Pot Life
50°F	90 min.	90 min.
75°F	60 min.	60 min.
90°F	30 min.	30 min.

**PRIMING**

**Concrete:** Concrete must always be primed to aid in the “wetting out” required for good bonding. Mix **Primer 67 or 67C Component A with Component B** for 2-3 minutes and apply with a brush, roller or spray. We recommend the basecoat be applied over tacky primer. Do not allow the primer to puddle. If application is not expected over tacky primer a light sand broadcast will provide better trowelling properties of the basecoat.

**Important** - With all epoxies after priming and before each additional coat, examine the surface for amine blush (oily film). If present, remove by washing with warm water and detergent.

Pot life of the mixed **Protecto-Flex 100XT** will depend on the temperature. To prevent material waste, do not mix more than can be used according to the corresponding tables:

Protecto-Flex 100XT Basecoat	
TEMPERATURE	POT LIFE
50°F	60 min.
75°F	30 min.
90°F	15 min.

Do not attempt to store mixed material. Residual material should be properly disposed of at the end of each work period.



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**PROTECTO-FLEX 100XT MIX RATIO (BY VOLUME)**

**Basecoat and Saturant**

Component A 1 gallon  
Component B 1 gallon

**PROTECTO-FLEX 100XT TOPCOAT MIX RATIO (BY VOLUME)**

Component A 1 gallon  
Component B 80 fl. oz.

**BASECOAT**

Add the correct amount of **Component B** to **Component A**. Mix thoroughly for 1-2 minutes. Add 20-30 lbs. of **G-1 Filler** per mixed gallon of basecoat resin to achieve a mortar like consistency. The amount of **G-1 Filler** may vary due to working conditions and applications. Mix well and apply a 1/16" thick basecoat to a smooth, even finish using a plasterer's trowel.

**REINFORCEMENT AND SATURANT**

Before the basecoat begins to cure, press one layer of one (1) ounce chopped strand fiberglass mat into the wet basecoat. Lap all edges by 1 inch. Use a stiff, natural bristle brush or roller and press the mat firmly into the basecoat, using a technique similar to hanging wallpaper, to remove all air pockets and wrinkles. Saturate the fiberglass with the basecoat resin mixture, using a short nap paint roller. Roll vigorously until the mat has lost its white color and turns translucent. Use enough resin to "wet out" the mat, but do not allow the saturant to puddle. Immediately roll the wet fiberglass with a ribbed roller to remove any trapped air or wrinkles.

Allow the basecoat and reinforcement application to cure overnight. Before applying the topcoat, examine the fiberglass for any air bubbles or blisters. If these are present, they must be cut out and repaired, using the

procedure above. All overlapped seams should be sanded flat. The topcoat will emphasize any imperfections in the fiberglass. If excessive blistering of the basecoat reinforcement has occurred, it may have been caused by inadequate rolling with a ribbed roller.

**Protecto-Flex 100XT Topcoat**

Temperature	Pot Life
50°F	50-60 min.
75°F	30-40 min.
90°F	20-30 min.

**TOPCOAT**

Mix the **Protecto-Flex 100XT** topcoat **Component A** for 1-2 minutes to redisperse pigments and fillers. Add the correct amount of **Component B** to **Component A** and mix thoroughly until a uniform color is achieved. Apply at 15-20 mils WFT using a brush, roller or spray to a smooth even finish.

Airless spray is recommended using a 30:1 pump equipped with a 60 mesh filter. The nozzle should be tungsten carbide with a 0.017-0.035-inch diameter opening and a 25°-60° fan. Suggested output pressure (depending on temperature) is 1,500 PSI.

**Cure Cycle for Protect-Flex 100XT Topcoat**

TEMPERATURE	RECOAT TIME		CURE TIME
	MIN.	MAX.	
50°F	16-18 hrs.	120 hrs.	96 hrs.
75°F	8-10 hrs.	72 hrs.	48 hrs.
90°F	6-8 hrs.	48 hrs.	36 hrs.

If these recoat times are exceeded, consult a Dudick representative. Sanding or abrasive blasting may be required before the next coat. Recoat items are dramatically reduced when the coating is exposed to direct sunlight.

Application of **Protecto-Flex 100XT** in direct sunlight may lead to blistering, pinholes, or wrinkling due to outgassing of air in the concrete and high substrate temperatures. Double priming, shading, or evening application may be required. Consult a Dudick representative.

## CLEANING

Use **S-10 Cleaning Solvent** to clean tools and equipment.

## SHIPPING

Refer to Material Safety Data Sheets.

## STORAGE

**Warning:** All Dudick products classified by DOT with either white, yellow or red labels must not be mixed or stored together as an explosive reaction can occur.

Store all products in a cool, dry area away from open flames, sparks or other hazards.

When stored in their original, unopened containers at 50°F-75°F, **Primer 67** components and **Protect-Flex 100XT** components have a six month shelf life. **Primer 67 C** components will have a thirty-day shelf life. Storage in direct sunlight or excessive heat will reduce working time and shelf life.

## SAFETY

**M.S.D.S: Material Safety Data Sheets must always be read before using products.** **Protecto-Flex 100XT** systems are intended for application by experienced, professional personnel. Dudick, Inc. can supply supervision to help determine that the surface has been properly prepared, the ingredients correctly mixed, and the materials properly and safely applied.

If **Protecto-Flex 100XT** materials are to be applied by your own personnel or by a third party contractor, please be sure that they are aware of the following safety precautions:

- Exposure to resins and hardeners through direct skin contact and/or inhalation may cause severe dermatitis reactions in some people. Cleanliness of the skin and clothing is critical and must be of paramount concern.
- Fumes are flammable and heavier than air. Proper ventilation should be maintained to minimize breathing of concentrated fumes.

- Suitable respirators should be used during application.
- Safety glasses, gloves, and suitable protective clothing must be worn at all times during application.
- If contact with hardeners occurs, remove any clothing involved and flush the skin with flowing water. Discard the clothing. Do not attempt to wash and reuse it. **Protecto-Flex 100XT** liquid can be removed with **S-10 Cleaning Solvent**, MEK, or lacquer thinner.
- Keep open flames and sparks away from the area where materials are being mixed and applied.
- If a rash occurs, remove the individual from the work area and seek a physician's care for dermatitis.
- In case of eye contact, flush with water for at least 15 minutes and consult a physician.
- If swallowed, do not induce vomiting; call a physician immediately.

**NOTE:** Dudick, Inc. ("Dudick") warrants all goods of its manufacture to be as represented in its catalogs and that the manufacture of its products by its employees or sub-contractors shall be performed in a workmanlike manner. Dudick's sole obligation under this warranty shall be to replace any material which its examination shall disclose to be defective. Dudick makes no warranty concerning the suitability of its product for application to any surface, it being understood that the goods have been selected and the application ordered by the Purchaser. DUDICK, INC. MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE GOODS SHALL BE MERCHANTABLE OR THAT THE GOODS ARE FIT FOR ANY PARTICULAR PURPOSE. THE WARRANTY OF REPAIR OR REPLACEMENT SET FORTH HEREIN IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES ARISING BY LAW OR OTHERWISE; AND DUDICK INC. SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DOWN TIME, DAMAGES TO PROPERTY OF THE PURCHASER OR OTHER PERSONS, OR DAMAGES FOR WHICH THE PURCHASER MAY BE LIABLE TO OTHER PERSONS, WHETHER OR NOT OCCASIONED BY DUDICK'S NEGLIGENCE. This warranty shall not be extended, altered or varied except by written instrument signed by Dudick and Purchaser.

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