



Dudick inc.

Corporate Offices
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PROTECTO-GLASS 160XT

**100% SOLIDS, TROWEL APPLIED,
REINFORCED, NOVOLAC EPOXY
LINING, 90 MILS (2.3 mm)**

FEATURES

State of Florida:
Secondary Containment Approval EQ-510
Meets all VOC Requirements
Low Odor
Reinforced to Bridge Small Surface Cracks

RECOMMENDED APPLICATIONS

Secondary Containment
Concrete Dike Areas
Trenches
Waste Sumps
Acid Storage Areas

CHEMICAL RESISTANCE

Sulfuric Acid (98%) Alkali Solutions
Dilute Inorganic Acids Oils
Salts
Solvents

TEMPERATURE LIMITS (STEEL)

Immersion up to 160°F
Dry - 200°F - Continuous
250°F - Intermittent

PHYSICAL PROPERTIES

Compressive Strength 6,000-7,000 PSI
ASTM C-579
Tensile Strength 4,000-5,000PSI
ASTM C-307
Flame Spread 33 mm
ASTM D-635
Taber Abrasion 72 mg.
ASTM D-4060
Tensile Bond Strength Cohesive failure
ASTM D-4541 of concrete
VOC 0
ASTMD-3960

SPECIFICATIONS

Protecto-Glass 160XT shall be an amine cured novolac epoxy lining consisting of a 1/16” trowel applied basecoat, one layer of one ounce fiberglass mat reinforcement, and a flake-filled epoxy topcoat as manufactured by Dudick, Inc. Installation shall be in accordance with the manufacturer’s recommended practices.

THE PROTECTO-GLASS 160 XT SYSTEM

Protecto-Glass 160XT uses a moisture tolerant primer, 1-ounce fiberglass mat reinforcement and a flake-filled novolac topcoat to protect concrete and steel.

Primer 67: The primer used in the **Protecto-Glass 160XT System** is a flexibilized epoxy which deeply penetrates the concrete substrate and provides the “wet out” required for good bonding. The primer is tolerant of the residual moisture within the concrete.

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

Basecoat: Protecto-Glass 160XT uses novolac epoxy resin and silica fillers to reduce the coefficient of expansion and provide a thixotropic base on which to embed the reinforcement.

Reinforcement: One ounce 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: Novolac 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 the **Protecto-Glass 160XT** topcoat provide the low permeability, high film integrity, and chemical resistance required for prolonged substrate protection.

ESTIMATING QUANTITIES AND ORDER BILL OF MATERIAL

| APPROXIMATE SQUARE FEET PER GALLON | | |
|------------------------------------|--------------------------|--------------------------|
| | CONCRETE | STEEL |
| PRIMER 67 | 150-200 ft. ² | 275-300 ft. ² |
| PRIMER 67C | 100-150 ft. ² | ----- |
| Protecto-Glass 160 XT | | |
| Basecoat & Saturant | 25 ft. ² | |
| G-1 Filler | .5 lb./ ft. ² | |
| Topcoat (15-20 mils DFT) | 60-70 ft. ² | |
| S-10 Solvent | 500 ft. ² | |

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

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Metal: Abrasive blast to a white metal finish according to SSPC SP5 or NACE # 1 and a 3.0 mil minimum profile.

Concrete: Concrete must be prepared mechanically to remove surface laitance and other contaminants. 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 for both concrete and metal 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

| | | |
|------------|-------------|------------|
| 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 67/67 C POT LIFE

| TEMPERATUR E | PRIMER 67 | PRIMER 67C |
|-----------------|--------------|---------------|
| 50°F | 90 min. | 110 min. |
| 75°F | 60 min. | 90 min. |
| 90°F | 30 min. | 50 min. |

PRIMING

Metal: Mix the pre-measured units of **Component A with Component B**. Prime all metal surfaces to be coated with **Primer 67** at 3-4 mils, WFT.

Concrete: Mix the pre-measured units of **Component A with Component B**. Prime all concrete surfaces to be coated with either **Primer 67 or 67C** at 3-4 mils WFT. The coating may be applied over primer that is “tacky”. Do not allow the primer to puddle.

If application is not expected over “tacky” primer a light sand broadcast will aid in troweling.

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-Glass 160XT** will depend on the temperature. To prevent material waste, do not mix more than can be used according to the corresponding tables:



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Basecoat

| TEMPERATUR E | POT LIFE |
|-----------------|-------------|
| 50°F | 60 min. |
| 75°F | 45 min. |
| 90°F | 30 min. |

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

PROTECTO-GLASS 160XT MIX RATIOS (BY VOLUME)

Basecoat and Saturant

Component A 1 gallon
Component B 90 fl. oz.

Topcoat

Component A 1 gallon
Component B 80 fl. oz.

BASECOAT

Add the correct amount of **Component B** to **Component A** and mix thoroughly for 1-2 minutes. Add 18-25 lbs. of **G- 1 Filler** to achieve a mortar-like consistency. 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 1-ounce 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 the ribbed roller.

Topcoat

| TEMPERATUR E | POT LIFE |
|-----------------|----------|
| 50°F | 50 min. |
| 75°F | 30 min. |
| 90°F | 15 min. |

TOPCOAT

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. Brush or roller application may require additional coats to meet the specified dry film thickness.

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 Cycles for Protecto-Glass 160XT:

| TEMPERATUR E | RECOAT TIME | | CURE TIME |
|-----------------|-------------|----------|--------------|
| | MIN. | MAX. | |
| 50°F | 12-16hrs. | 120 hrs. | 96 hrs. |
| 75°F | 6-8 hrs. | 72 hrs. | 36 hrs. |
| 90°F | 4-6 hrs. | 48 hrs. | 24 hrs. |

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

Application of **Protecto-Glass 160XT** in direct sunlight may lead to blistering, pinholes, or wrinkling due to out-gassing of air in the concrete and high substrate temperatures.

Double priming, shading, or evening application may be required. Consult a Dudick representative.

TESTING

Where immersion service is required, spark test the lining with a 10,000 Volt AC spark tester.

Mark and repair all pinholes, using **Protecto-Glass 160XT** topcoat. Retest only the repairs.

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 may 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 and Protecto-Glass 160XT** components have a six-month shelf life. **Primer 67C** 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-Glass 160XT 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-Glass 160XT** 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-Glass 160XT** 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



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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.

3/18/10