



**Dudick inc.**

Corporate Offices  
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**PROTECTO-COAT 800FR**

**FIRE RETARDANT CLASS A,  
VINYL ESTER COATING, 30-40 MILS  
(1.0 mm)**

**FEATURES**

State of Florida:  
Secondary Containment Approval EQ-510  
FDA Compliant (800)  
Conductive Version Available  
Low Permeability  
Fire Retardant, Class A

**RECOMMENDED APPLICATIONS**

Structural Steel	Spent Carbon
Water Storage Towers	Storage Tanks
Plating Lines, Exterior	Steel Pump
Pickling Lines, Exterior	Supports
Underground Tanks	Catwalks
and Piping	Chemical Storage
Floors	Tanks

**CHEMICAL RESISTANCE**

Organic Acids	Oils
Inorganic Acids	Salts
Alkali Solutions	

**TEMPERATURE LIMITS (METAL APPLICATIONS)**

Immersion up to 130° F  
Dry - 250° F - Continuous  
300° F - Intermittent

**COLORS:** White and Gray

**PHYSICAL PROPERTIES**

Tensile Strength	2,500-2,800 PSI
ASTM C307	
Flexural Strength	5,000-5,200 PSI
ASTM C580	
Adhesion to Steel	2,000 PSI
ASTM D4541	
Taber Abrasion	50 mg.
ASTM D4060	
Flame Spread Index	10
ASTM E84	
Smoke Development Index	160
ASTM E84	
WVT	0.0022 perm. in.
ASTM E96	
Shore D Hardness	75-80
ASTM D2240	
VOC	80 g/l
ASTM D2369, Method E	

**SPECIFICATIONS**

**Protecto-Coat 800FR** shall be a 30-40 mils thick, flake filled vinyl ester coating, consisting of a basecoat and topcoat of 15 20 mils each, as manufactured by Dudick, Inc. Materials shall be brush, roller or spray applied in accordance with the manufacturer's recommended practices..

**THE PROTECTO-COAT 800FR SYSTEM**

**Protecto-Coat 800FR** is a fire retardant, thermosetting vinyl ester coating which utilizes flake fillers for resistance to a wide variety of acids, caustics, salts, oils and mild alkali solutions. The **Protecto-Coat 800FR** offers the most versatile protection in the Protecto-Coat line and is F.D.A. compliant.

**Primer 27** is designed to prevent abrasive-blasted metal from developing rust bloom prior to the application of the

**Protecto-Coat 800FR.** For maximum performance, all metal surfaces should be primed, but primer may not be needed for mild, non-immersion service. Concrete, cement board and gypsum board however, must always be primed to aid in the “wetting out” required for good bonding.

**Primer 27C** is designed for applications on concrete where spark: testing is required or specified.

**BASECOAT/ SECOND COAT/TOPCOAT**

**Protecto-Coat 800FR** Basecoat/Topcoat are filled with flakes to reduce the coefficient of expansion and provide a chemical resistant barrier. The overlapping leaf arrangement of flakes reduces water vapor permeation and permits chemical exposure at higher temperatures without increasing the thickness of the coating.

**ESTIMATING QUANTITIES AND ORDER BILL OF MATERIAL**

*Note:* Resins include 3 oz. hardener/gal. as standard

APPROXIMATE SQUARE FEET PER GALLON		
	CONCRETE	STEEL
PRIMER 27	150-200 ft. <sup>2</sup>	250-300 ft. <sup>2</sup>
PRIMER 27C	100-150 ft. <sup>2</sup>	-----
Protecto-Coat 800FR		
Actual 30-40 MIL DFT	30-35 ft. <sup>2</sup>	30-35 ft. <sup>2</sup>
Theoretical 30-40 MIL DFT	40 ft. <sup>2</sup>	40 ft. <sup>2</sup>
S-10 Solvent	500 ft. <sup>2</sup>	500 ft. <sup>2</sup>

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

**During manufacturing, some air entrapment occurs in the more viscous lining systems. During storage and transportation, settling can occur when entrapped air escapes this mix indicating less than 100% volumetric fill. All products are priced and sold by weight and not necessarily by volume.**

**APPLICATION INSTRUCTIONS**

**SURFACE PREPARATION**

**Metal:** Metal surfaces must be abrasive blasted to an appropriate finish.

Immersion and heavy spillage service: White Metal, SSPC SP 5 or NACE #1, minimum 3.0 mil profile. Heavy non-immersion service (i.e. fumes and spillage): Near white, SSPC SP 10 or NACE #2, minimum 2.0 mil profile. Atmospheric service: Commercial SSPC SP 6 or NACE #3, minimum 2.0 mil profile.

**Concrete:** Concrete mechanically prepared 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-7234.

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 800**. (Refer to separate product bulletin)

**Cement Board:** All new cement board must be properly cured before application of the primer. Patch all voids with **Scratch Coat 800** (Refer to separate product bulletin), or other approved Dudick materials. Clean the surface to remove any dirt, dust, grease, mildew, oil, wax, or other contaminants.

**Gypsum Board:** Allow new drywall finishes to dry before application of primer. Patch all voids with **Scratch Coat 800** (Refer to separate product bulletin), or other approved Dudick materials. Clean the surface to remove any dirt, dust, grease, oil, wax, mildew and other contaminants.

**APPLICATION SPECIFICATIONS**

Substrates 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.



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## PROTECTO-COAT 800FR

**FIRE RETARDANT CLASS A,  
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 (1.0 mm)**

Hardener amt./gal. liquid	Substrate Temp.	Primer		Protecto- Coat 800FR
		27	27C	
PH-1	50°-70°F	3-4 oz.	4-5 oz.	3-4 oz.
PH-1	70°-90°F	2-3 oz.	3-4 oz.	2-3 oz.
PH-2C	60°-70°F	-----		2-3 oz.
PH-2C	70°-90°F	-----		1-1/2 oz.

Pot life of the mixed **Protecto-Coat 800FR** will depend on the temperature. To prevent material waste and avoid damage to equipment, do not mix more material than can be used according to the following table:

TEMPERATURE	POT LIFE
50°F	60 min.
75°F	40 min.
90°F	25 min.

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

### PRIMING

**Metal:** For maximum performance, prime all metal surfaces. Add the correct amount of **PH-1**

**Hardener** to the **Primer 27** and mix to achieve a uniform consistency. Apply at 3-4 mils WFT with a brush, spray or roller. Do not allow the primer to puddle.

**Concrete** surfaces must be thoroughly dry before the application of the primer. All concrete must be primed with either **Primer 27 or 27C** at 3-4 mils WFT. Do not allow the primer to puddle.

**Primer 27C** must be mechanically mixed for 1-2 minutes prior to adding the correct amount of **PH-1 Hardener**; apply using roller only. Use brush application for touch-up or repair.

### BASECOAT / SECOND COAT / TOPCOAT

Mix the **Protecto-Coat 800FR** separately to re-disperse pigments and fillers which have settled. Then add the correct amount of **PH-2C Hardener** to the **Protecto-Coat 800FR** and mix thoroughly until a uniform color is achieved. Apply at 15-20 mils WFT by brush, roller, spray application.

**OPTION:** If a 1/8" thickness is required, broadcast sand into the **Protecto-Coat 800FR**. The fire retardancy properties of the **Protecto-Coat 800FR** are not affected by adding sand or aluminum oxide.

**In order to prevent curing problems with styrenated products, air movement and/or ventilation must be maintained not only during application but also after application until the system has totally cured. This will prevent high concentration of styrene inhibiting/retarding the cure of the system.**

### SPRAY SPECIFICATIONS

**Plural Component** Binks B8-D 37:1 Pump  
 Gun: Binks Century Vinyl Ester with 108-9 tips  
 Pump: Binks B8  
 Slave/Catalyst Ratio: Catalyst ratios of 0.5% - 3.5%  
 Flow(GPM) @ 60c/m: 3.4 GPM (12.9 l/m) at 60 cycles/min of resin  
 Max Output Fluid Pr.: 2960 psi (204 bar)

### Protecto-Coat 800FR Cure Cycle

TEMPERATURE	RECOAT TIME		CURE TIME
	MIN.	MAX.	
50°F	12 hrs.	120 hrs.	96 hrs.
75°F	4 hrs.	96 hrs.	24 hrs.
90°F	3 hrs.	72 hrs.	10 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-Coat 800FR** 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

If spark testing is required, use a DC spark/holiday tester set to the appropriate voltage to achieve a minimum 100 volts per mil of applied coating. An AC tester can be used, but is not as effective as a DC tester. Mark and repair all pinholes, using **Protecto-Coat 800FR**. Retest only the repairs.

## CLEANING

Use **S-10 Cleaning Solvent** to clean tools and equipment. **DO NOT USE ACETONE.**

## 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.

All products should be stored in a cool, dry area, away from open flames, sparks or other hazards.

When properly stored in their original, unopened containers, at 50°F-75°F, **Primer 27** and **Protecto-Coat 800FR** components will have a shelf life of three-months or less, at temperatures above 75°F, two-months or less. **Primer 27C** will have a thirty-day shelf life. **PH-1 Hardener** has a shelf life of six months at 50°F-75°F.

## SAFETY

**M.S.D.S.: Material Safety Data Sheets must always be read before using products.** **Protecto-Coat 800FR** 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-Coat 800FR** 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-Coat 800FR** liquid can be removed with S-10 Cleaning Solvent, MEK, or lacquer thinner. **DO NOT USE ACETONE.**
- 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**



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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.

10/7/19