



Dudick inc.

Corporate Offices
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PROTECTO-COAT 900HT-PLUS

GLASS FLAKE FILLED, HIGH TEMPERATURE, HIGH PERFORMANCE, SPRAY APPLIED NOVOLAC VINYL ESTER COATING, 30-60 MILS (1 - 1.4 mm)

FEATURES

Low Permeability
High Temperature Resistance

RECOMMENDED APPLICATIONS

Process Tanks
Storage Tanks
FGD Systems

CHEMICAL RESISTANCE

Organic Acids	Oils
Inorganic Acids	Salts
Alkali Solutions	Solvents

TEMPERATURE LIMITS (METAL APPLICATIONS)

Immersion up to 180° F
Dry - 410°F - Continuous
450°F - Intermittent

COLORS: White and Gray

PHYSICAL PROPERTIES

Tensile Strength ASTM C-307	2,500-2,800 PSI
Flexural Strength ASTM C-580	5,000-5,200 PSI
Adhesion to Steel ASTM D-4541	2,000 PSI
Taber Abrasion, CS-17 wheel 1000 cycles, 1000 gram load ASTM D-4060	20 mg.
Flame Spread ASTM D-635	<5 mm
WVT ASTM E-96	<0.0003 perm.in.
Shore D Hardness ASTM D-2240	75-80

SPECIFICATIONS

Protecto-Coat 900HT-PLUS shall be an ultra-high molecular weight, novolac vinyl ester coating with glass flake fillers as manufactured by Dudick, Inc. It must be applied over a primed surface by **spray only** in two or three coats for a total of 30-60 mils DFT, in accordance with the manufacturer’s recommended practices.

THE PROTECTO-COAT 900HT-PLUS SYSTEM

Protecto-Coat 900HT-PLUS uses two or three layers of thermosetting, glass flake filled, ultra-high molecular weight, novolac vinyl ester resin to build up the protection that metal and concrete need in chemical manufacturing or processing operations. When fully cured, the separate elements lose their individual identity and become a single, monolithic coating.

Primer 27 is designed to prevent abrasive blasted metal from developing rust bloom prior to the application of the **Protecto-Coat900HT-PLUS**.For maximum performance, all metal surfaces should be primed, but primer may not be needed for mild, non-immersion service. Concrete, however, must always be primed to aid in the “wetting out” required for good bonding.

Basecoat, Second Coat and Topcoat:

Protecto-Coat 900HT-PLUS is filled with glass flakes and provides an abrasion resistant and chemical resistant barrier. The overlapping leaf arrangement of glass 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. ²	250-300 ft. ²
Protecto-Coat 900HT-PLUS		
Actual 15-20 MIL DFT	60-70 ft. ²	60-70 ft. ²
Theoretical 15-20 MIL DFT	75 ft. ²	75 ft. ²
S-10 Solvent	500 ft. ²	500 ft. ²

***Protecto-Coat 900HT-PLUS** needs to be applied at minimum 2 coats or 30-35ft.² per gallon at 30-40 mils.

*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 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 International Concrete Repair Institute **with pea**

gravel exposed. 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 800**. (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.

Hardener amt./gal. liquid	Substrate Temp.	Primer		Protecto-Coat 900 HT-PLUS
		27	27 C	
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.

Pot life of the mixed **Protecto-Coat 900HT-PLUS** 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.



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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** at 3-4 mils WFT. Do not allow the primer to puddle.

NOTE: Protecto-Coat 900HT-PLUS must be spray-applied. Use brush application for small touch-up or repair work only.

BASECOAT/SECOND COAT/TOPCOAT

Mix the **Protecto-Coat 900HT-PLUS** separately to re-disperse pigments and fillers which have settled. Then add the correct amount of **PH- 1 Hardener** to the **Protecto-Coat 900HT-PLUS** and mix thoroughly until a uniform color is achieved. Apply at 15-20 mils WFT using spray application. When a third coat is required apply two coats of basecoat. Allow the basecoat to cure until “firm” or slightly “tacky” before applying the topcoat.

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 108-94109 or 108-94409
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)

Cure Cycle for Protecto-Coat 900HT-PLUS

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.	20 hrs.

Protecto-Coat 900HT-PLUS must be recoated within 6 hours when exposed to direct sunlight.

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 900HT-PLUS** 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 pin holes, using **Protecto-Coat 900HT-PLUS**. Retest only the repairs.

Brush application is acceptable for small 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 900HT-PLUS** components will have a shelf life of three-months or less, at temperatures above 75°F, two-months or less. **PH-1 Hardener** has a six month shelf life at 50°F-75°F.

SAFETY

M.S.D.S - Material Safety Data Sheets must always be read before using products.

Protecto-Coat 900HT-PLUS is 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 900HT-PLUS** is 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 900HT-PLUS** 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 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.

11/26/18