Protecto-Coat 900

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Flake-Filled, Novolac Vinyl Ester Coating
Description	Protecto-Coat 900 exhibits a high cross-link density and offers the best solvent and acid resistance. Protecto-Coat 900 systems are filled with Mica flakes to reduce the coefficient of expansion, and provide a chemical resistant barrier. The lamellar arrangement of flakes reduces water vapor permeation and permits chemical exposure at higher temperatures without increasing the thickness of the coating.
Features	• Excellent Chemical Resistance • Conductive Version Available • Low Permeability
Typical Uses	• Structural Steel • Spent Carbon • Water Storage Towers • Storage Tanks • Plating Lines, Exterior • Steel Pump • Pickling Lines, Exterior • Supports • Underground Tanks and Piping • Catwalks • Chemical Storage • Floors • Tanks
Color	White and Gray
Primer	Primer 27 or Primer 27C
Dry Film Thickness	15 - 20 mils (381 - 508 microns) per coat 30-40 mils (750-1000 microns) total thickness
Theoretical Coverage Rates	40 ft²/gal at 40 mils (1 m²/l at 1000 microns) Note: Resins include 3 oz. hardener/gal. as standard Quantities shown are for estimating purposes only. Actual field usage may vary
VOC Value(s)	73.5 g/L
Dry Temp. Resistance	Continuous: 300°F (149°C) Non-Continuous: 350°F (177°C)
Chemical Resistance	• Organic Acids • Oils • Inorganic Acids • Salts • Alkali Solutions • Solvents

SUBSTRATES & SURFACE PREPARATION

Steel

Immersion and heavy spillage service: White Metal, SSPC-SP 5/NACE No. 1, minimum 3.0 mil (75 microns) profile.
Heavy non-immersion service (i.e. fumes and spillage): Near white, SSPC SP 10 or NACE #2, minimum 2.0 mil (50 microns) profile.
Atmospheric service: Commercial SSPC-SP6/NACE No. 3, minimum 2.0 mil (50 microns) profile.

Concrete

Must be primed with Primer 27 or Primer 27C
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 (per SSPC SP-13/NACE No.6). Surface texture should be similar to 40-60 grit sandpaper or the visual standard, CSP 5 or greater from the International Concrete Repair Institute (ICRI) with pea gravel exposed. The prepared surface shall have a minimum tensile strength of 250 PSI per ASTM D7234.

All concrete substrates must be checked for moisture and pass the ASTM D4263 Plastic Sheet Test prior to product application.

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

Test Method	Results
Adhesion to Steel (ASTM D4541)	2,000 PSI (13.8 MPa)
Flame Retardant Version WVT (ASTM E96)	Available upon request 0.0022 perm.in.
Flame Spread (ASTM D635)	<5 mm
Flame Spread Index (ASTM E8409)	35
Flexural Strength (ASTM C580)	5,000-5,200 PSI (34.5-35.8 MPa)
Shore D Hardness (ASTM D2240)	75-80
Smoke Developed Index (ASTM E84-09)	130
Taber Abrasion (ASTM D4060)	23 mg
Tensile Strength (ASTM C307)	2,500-2,800 PSI (17-19.3 MPa)

MIXING & THINNING

Mixing

Hardener PH-1 Amount/Gallon Resin
3-4 oz (89-118 ml) @ 50ºF-70ºF (10ºC-24ºC)
2-3 oz (59-89 ml) @ 70ºF-90ºF (24ºC-32ºC)
Mix the Protecto-Coat 900 separately to re-disperse pigments and fillers which have settled. Then, add the correct amount of PH-1 Hardener to the Protecto-Coat 900 and mix thoroughly until a uniform color is achieved.

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

Thinning

Not required

If needed, Styrene can be used to thin the coating or prime the pump

MIXING & THINNING

Pot Life	Pot life of the mixed Protecto-Coat 900 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: 60 minutes @ 50ºF (10ºC) 40 minutes @ 75ºF (24ºC) 25 minutes @ 90ºF (32ºC)

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General	Materials shall be brush, roller or spray applied in accordance with the manufacturer's recommended practices.
Spray Application	• Pump Ratio: 45:1 or greater, capable of at least 1 GPM. Hopper or siphon feed is preferred. • Filters: Ensure all filters are removed. • Material Hose: 1/2" I.D. (min.), 4500 psi or greater rated. • Tip Size: 0.25-0.31" • Output PSI: 3000-3500 psi (min.) • Gun: Airless gun rated for at least 4500 psi. Filter-free or front-fed gun is preferred PTFE packings are recommended and available from the pump manufacturer. When siphon feed is used, change the pail out as frequent as necessary to avoid exotherm of the catalyzed material.
Brush & Roller (General)	Brush or roller application may require additional coats to meet the specified dry film thickness.

APPLICATION PROCEDURES

General	Apply at 15-20 mils (375-500) WFT using a brush, spray or roller to an even, smooth finish. 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.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	60°F (16°C)	60°F (16°C)	60°F (16°C)	0%
Maximum	80°F (27°C)	110°F (43°C)	110°F (43°C)	90%

Substrate temperature must be 5ºF (3ºC) above the dew point.

CURING SCHEDULE

Surface Temp.	Minimum Recoat Time	Maximum Recoat Time	Cure Time
50°F (10°C)	12 Hours	5 Days	7 Days
75°F (24°C)	4 Hours	4 Days	5 Days
90°F (32°C)	3 Hours	3 Days	90 Hours

Protecto-Coat 900 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 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 / CERTIFICATION / LISTING

General

Dudick flooring systems can be built to meet or exceed the requirements of Static or Dynamic Coefficient of Friction testing per installation to meet static coefficient of friction requirements for ANSI B101.1 of >0.6 and dynamic coefficient of friction (DCOF)* – Wet ANSI A326.3 of >0.42.

CLEANUP & SAFETY

Cleanup

Use S-10 Cleaning Solvent, Carboline Thinner 76 or Carboline Thinner 2 to clean tools and equipment.

Safety

Read and follow all caution statements on this product data sheet and on the SDS. Employ normal safety precautions. Keep container closed when not in use.

PACKAGING, HANDLING & STORAGE

Packaging

1 Gallon Kits:
Part A: 0.97 Gallons (in a 1 gal can)
PH-1 Hardener: 4 oz (in a plastic bottle)

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5 Gallon Kits:
Part A: 4.85 Gallons (in a 5 gal pail)
PH-1 Hardener: 20 oz (in a plastic bottle)

Air entrapment during manufacturing can occur in viscous coatings. These products are filled and sold by weight rather than by volume to ensure consistent and accurate fill levels.

Shelf Life

Part A: 3 months at 50°F-75°F (10°C-24°C)*
PH-1 Hardener has a shelf life of six months at 50°F-75°F (10°C-24°C)

When properly stored in their original, unopened containers.
*2 months at temperatures above 75°F (24°C)

Storage

Warning: All Dudick products classified by DOT with 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. Exposure to direct sunlight or excessive heat may reduce working time.

Shipping Weight (Approximate)

Refer to Material Safety Data Sheets.

WARRANTY

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