

SELECTION & SPECIFICATION DATA

Generic Type	Graphite Flake-Filled, Novolac Vinyl Ester Coating
Description	A novolac vinyl ester resin formulated specifically as a silica-free lining and utilizes graphite flake fillers for resistance to a wide variety of acids, caustics, salts, oils and mild alkali solutions.
Features	<ul style="list-style-type: none"> • Excellent Chemical Resistance • Low Permeability
Typical Uses	<ul style="list-style-type: none"> • Structural Steel • Storage Tanks • Plating Lines, Exterior • Pickling Lines, Exterior • Chemical Storage • Floors
Color	Dark Grey (F748)
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
Solid(s) Content	82% by volume
Coverage Rate	30-35 sq ft per gallon @ 30-40 mils total DFT
VOC Value(s)	73.5 g/L
Dry Temp. Resistance	Continuous: 300°F (149°C) Non-Continuous: 350°F (177°C)
Chemical Resistance	<ul style="list-style-type: none"> • 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, Heavy non-immersion: SSPC-SP 10/NACE No. 2, minimum 2.0 mil (50 microns) profile. Atmospheric service: Commercial SSPC-SP6/NACE No. 3, minimum 2.0 mil (50 microns) profile.
--------------	--

Protecto-Coat 905

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

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 3 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	System	Results
Adhesion to Steel (ASTM D4541)		2,000 PSI (13.8 MPa)
Electrical Properties (ANSI STM 7.1)	Primer 27C with 2 coats of Protecto-Coat 905 at 15-20 mils dft each.	~5,000 OHMS
Flame Retardant Version, WVT (ASTM E96)		Available upon request, 0.0022 perm.in.
Flame Spread (ASTM D635)		<5 mm
Flame Spread Index (ASTM E84-09)		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) @ 50°F-70°F (10°C-24°C)

2-3 oz (59-89 ml) @ 70°F-90°F (24°C-32°C)

Mix the material separately to re-disperse pigments and fillers which have settled. Then, add the correct amount of PH-1 Hardener 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

Pot Life

Pot life of the mixed material 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 @ 50°F (10°C)

40 minutes @ 75°F (24°C)

25 minutes @ 90°F (32°C)

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.
Airless Spray	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.
Brush & Roller (General)	Brush or roller application may require additional coats to meet the specified dry film thickness.

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 5°F (3°C) 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

Must be recoated within 6 hours when exposed to direct sunlight.

If these recoat times are exceeded, it must be abraded. Consult a Dudick representative for more information.

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.

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.
Ventilation	Ventilation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. Use MSHA/NIOSH approved air respirators as needed.

Protecto-Coat 905

PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

Packaging	1 Gallon Kits: Part A: 0.97 Gallons (in a 1 gal pail) PH-1 Hardener: 0.03 Gallons in a plastic bottle
	5 Gallon Kits: Part A: 4.85 Gallons (in a 5 gal pail) PH-1 Hardener: 1.5 Gallons in a plastic bottle
Shelf Life	Part A: 3 months at 50°F-75°F (10°C-24°C)* PH-1 Hardener: 6 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)	1 gallon kit: 13.7 lbs. 5 gallon kit: 53.5 lbs.

WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.