

SELECTION & SPECIFICATION DATA

Generic Type	Vinyl Ester Primer
Description	A primer designed to provide improved adhesion when installing high performance linings over properly prepared concrete and steel. It lowers the chances of outgassing when used over concrete and can be used as a holding primer for abrasive blasted steel.
Features	<ul style="list-style-type: none"> • Can minimize outgassing on concrete • Promotes higher adhesion values between the substrate and lining material • Low viscosity promotes increased wet out of surface • Long pot life • Long recoat window (5 days @ 75°F/23°C) • Primer for polyester and vinyl ester systems
Typical Uses	<ul style="list-style-type: none"> • Secondary Containment • Storage Tanks • Structural Steel • Pump Housings and Floors (Spillage)
Color	Clear (0000)
Dry Film Thickness	<p>3 - 4 mils (76 - 102 microns) per coat</p> <p>Styrene, is a reactive solvent. Depending on environmental conditions and substrate porosity, the applied wet film thickness may not equal the dry film thickness.</p>
Solid(s) Content	77% by volume
Coverage Rate	<p>360-480 ft.²/gal at 3-4 mils (33.4-44.6 m²/gal at 75-100 microns)</p> <p>Quantities shown are for estimating purposes only. Actual field usage may vary.</p>
VOC Values	As Supplied : 97 g/l

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Concrete	Refer to System Information Sheet or product data sheet of the topcoat where Primer 27 is being used for concrete surface preparation requirements.
Ferrous Metal	<p>Surfaces must be abrasive blasted to an appropriate finish according to the topcoat's product data sheet or System Information Sheet. If not listed, minimums are below:</p> <p><u>Immersion and heavy spillage service</u>: White Metal SSPC SP-5 or NACE No.1, 3.0 mil minimum profile.</p> <p><u>Heavy, non-immersion service (i.e. fumes and spillage)</u>: Near white SSPC SP- 10 or NACE No.2, 2.0 mil minimum profile.</p> <p><u>Atmospheric service</u>: Commercial SSPC SP-6 or NACE No.3, 2.0 mil minimum profile.</p>
Non-Ferrous Metals	Surface profile should be a dense angular 1.5 - 3 mils and is best achieved through abrasive blasting in accordance with SSPC-SP16 for atmospheric exposure, or SSPC-SP17 for immersion environments.

Primer 27

PRODUCT DATA SHEET



PERFORMANCE DATA (TYPICAL VALUES)

Test Method	Results
Adhesion to Concrete ASTM D7234	Stronger than concrete
Adhesion to Steel ASTM D4541	2,200-2,500 PSI (15.2-17.2 MPa)
Tensile Elongation ASTM C307	5-6%
Tensile Strength ASTM C307	2,500-3,000 PSI (17.2-20.7 MPa)

MIXING & THINNING

Mixing | Mix Part A separately to redisperse pigments and fillers. Then, add the correct amount of PH- 1 Hardener to the Part A and mix thoroughly until a uniform color is achieved.

Thinning | Not recommended.

Ratio | **Hardener PH-1 Amount/Gallon Resin**
4-5 oz (118-148 ml)/gallon of PH-1 to Primer 27 @ 50°F (10°C)
3-4 oz (89-118 ml)/gallon of PH-1 to Primer 27 @ 75°F (24°C)
2-3 oz (59-89 ml)/gallon of PH-1 to Primer 27 @ 90°F (32°C)

Pot Life | Pot life of the mixed Primer 27 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 respective pot life time below:

60 minutes @ 50°F (10°C)
45 minutes @ 75°F (24°C)
30 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 | 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 Application | Pump Ratio: 30:1 or greater, capable of at least 1 GPM.
Filters: 60 mesh filters
Material Hose: 3/8" I.D. (min.), 3000 psi or greater rated.
Tip Size: 0.015"-0.019"
Output PSI: 2500-3000 psi (min.)
Gun: Airless gun rated for at least 3000 psi.

When siphon feed is used, change the pail out as frequent as necessary to avoid exotherm of the catalyzed material.
Recirculation may shorten pot life.

Brush & Roller (General) | Use a short-nap mohair roller cover with solvent resistant core. For best results, condition roller before application to minimize lint or loose fibers. A high quality solvent resistant brush may be used for hard to reach areas.

APPLICATION PROCEDURES

General | Mix Primer 27 with the correct amount of PH-1 Hardener and apply at 4-5 mils (100-125 microns) WFT with a roller, spray or brush. It is recommended that subsequent Dudick vinyl ester base and topcoats be applied over tacky Primer 27. **Do not allow the primer to puddle.**

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
50°F (10°C)	8 Hours	8 Days
75°F (24°C)	3 Hours	5 Days
90°F (32°C)	1.5 Hours	3 Days

Exposure of the primer to direct sunlight will shorten all recoat times by 50%. To optimize intercoat adhesion, it is recommended to apply the base or topcoat while the primer is tacky. If this is not possible, the above recoat times should be adhered to. If recommended recoat times are exceeded, sanding or abrasive blasting may be required before the coating, lining or floor topping may be applied.

Double priming, shading, or evening application may be required.

CLEANUP & SAFETY

Cleanup | Use S-10 Cleaning Solvent 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.

Caution | Fire and explosion hazards: This product contains less than 1% volatile components, however, vapors are heavier than air and can travel long distances, ignite and flash back. Eliminate all Ignitions sources. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

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PACKAGING, HANDLING & STORAGE

Packaging	1 Gallon Kits: Primer 27: 0.97 Gallons (in a 3.5 gal pail) PH-1 Hardener: 4 oz. (in a plastic bottle)
	5 Gallon Kits: Primer 27: 4.85 Gallons (in a 5 gal pail) PH-1 Hardener: 20 oz. (in a plastic bottle)
Shelf Life	Part A: 3 months at 75°F (23°C) (2 months at 76°F-90°F/24°C-32°C) PH-1 Hardener: 6 months at 75°F (23°C) Exposure to excessive heat may cause premature gelling, reduce working time and shelf life.
	Material is not returnable after purchase.
Storage	Warning: All Dudick products classified by DOT labels as either white, yellow or red labels, must not be mixed or stored together as an explosive reaction might occur. All products should be stored in a cool, dry area away from open flames, sparks or other hazards.
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Shipping Weight (Approximate)	1 gallon kits: 14.7 lbs 5 gallon kits: 50.9 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 Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. 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.