



Installation Guide for PAINTERS

099980 SE-LBP

Encasement Guide (Painters) LBP (11-01)

SAFE ENCASUREMENT SYSTEMS

FOR SURFACES CONTAINING LEAD-BASED PAINT (LBP).

I. GENERAL

1.01 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to install (spray-apply, brush or roller apply) to safely stabilize and protect LBP through the installation of the Specialty Elastomeric Encasement System directly over LBP as outlined in this spec.
- B. The manufacturer's application instructions for each product used is considered part of these specifications and should be followed at all times.

1.02 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Containers and packaging: Deliver materials in original sealed containers, clearly marked with manufacturers logo, brand name, and type of material.
- B. Storage: Store materials between 40°F and 100°F with careful handling to prevent damage to products. Do not store for long periods in direct sunlight, at excessive temperatures or at temperatures below freezing.
- C. Protection: Protect all materials from damage or freezing during transit, handling, storage, and installation.

1.03 PROJECT CONDITIONS

- A. Environmental Requirements/Conditions
 - 1. These minimum recommendations for material coverage are for ideal conditions. The number of gallons to coat 100 square feet may need to be increase due to uneven application, rough surface texture, heat and wind conditions while spraying or applying, and other variables.
 - 2. Do not apply materials unless surface to receive encasement system is dry.
 - 3. Install all material in strict accordance with all published safety or applicable regulations of the manufacturer and/or local, state, and/or federal agencies, which have jurisdiction.
 - 4. The entire system shall be fully adhered to the surface on which it is applied. Voids left under the system by creating bridges are not acceptable.
 - 5. Do not proceed with application of coating or sealing materials when surface temperature is less than 50°F. No coating system shall be applied if weather will not permit it to dry prior to exposure to precipitation or freezing.
 - 6. Instructions for use of all encasement materials and application equipment should be read and followed at all times. The use of a Test Patch is required in the State of Massachusetts and Connecticut and is recommended herein.

II. PRODUCTS

2.01 SAFE ENCASUREMENT SYSTEM

- A. The SAFE Encasement System is a specialty Elastomeric acrylic polymer that is manufactured by SAFE Encasement Systems.
1. Coatings shall be nontoxic, safe and easy to use, contain no hazardous ingredients by OSHA definition, be nonflammable, cleanup with water and finished surface shall have a tested Class "A" (1) fire rating.
 2. Coating materials shall be long lasting, remain highly flexible, chalk resistant, resist cracking, peeling, algae and fungus that cause future indoor air quality concerns.
 3. Coatings shall have independent ASTM laboratory test data on adhesion, permeability, and aged flexibility, with elastic properties of over 200% to allow for building movement without cracking.
 4. Coating materials shall have low V.O.C. (Volatile Organic Compounds) content.
 5. Coating materials shall be safe to use and comply with all building codes.
- B. Coating materials shall comply with the following standards:
1. ASTM E-1795-97, the National Standard for Encapsulation materials, nontoxic, passed all tests when used with SE-120 Protective Skin (approved nationwide for interior and/or exterior use).
 2. ASTM E-84-99, Surface Burning Characteristics, Class I, Flame Spread = 10, Smoke Developed = 15, (this is equal to NFPA 255, ANSI/UL # 723, UBC 8.1).
 3. ASTM E-162-98, Passed Surface Flammability with a Radiant Energy Source, ($F_s \times Q = I_s$), $F_s = 1.29$, $Q = 1.77$, $I_s = 2.31$.
 4. ASTM D-3359, Passed Pull-off Adhesion (exceeds standards).
 5. ASTM D-4214, Passed Chalking (encasement surface does not chalk).
 6. ASTM D-4060, Passed Dry Abrasion Resistance (exceeds test standards).
 7. ASTM D-522, Passed Flexibility (remains flexible over time, does not become brittle).
 8. ASTM D-2794, Passed Impact Resistance (160+ in.lbs. – exceeds standard).
 9. ASTM D-3273, D-3274, Passed Mildew Resistance.
 10. ASTM D-3359, Passed Paintability.
 11. ASTM D-2488, Passed Scrub Resistance (exceeds 1200+ cycles test limit).
 12. ASTM D-2370, Passed Tensile Properties (245 psi).
 13. ASTM D-3960, Zero VOC's (below 25 ppm. accurate detection limit for specified test).
 14. ASTM D-1653, (0.6 perms), water vapor can pass through the multi-layered protective membrane formed through the encasement process, "lets the building breathe".
 15. ASTM D-1308, Chemical & Water Resistance (exceeded the standards on all tests).
 16. ASTM G-53, Weathering/Aging (1,000 hours) – Provides weatherization properties
 17. MA Approved, Passed Encapsulation Protocol, Dept. of Health Services.
 18. Approved by the States of MA, NY, MN, CO, OH and CA.
 19. Approved by the City of Los Angeles.
 20. Approved and listed by the City of New York, MEA# 301-00-M.
 21. UL Listed Surface (file # R16588).
 22. Other approvals or acceptances include; DOD, US Army Corps of Engineers, NEHC and the US Department of Agriculture (US Forestry).
 23. ASTM B-117 Salt Fog Chamber (no blistering or rusting after 1,500 hours of exposure)
 24. ASTM D-4585 Humidity Chamber (no blistering or rusting - 1,400 hours of exposure)

2.02 EQUIPMENT RECOMMENDATIONS

SAFE Encasement materials are prescreened at the factory and can be applied with brushes, short nap or disposable rollers, or airless spray equipment. Airless piston-type

spray equipment (with filters removed) that have a pump-rated capacity of 1.0 GPM (minimum) are suitable for application include:

- A. **Graco** - information line is (800) 328-0211.
- B. **Titan-SpeedFlo** - information line (Titan Tool Inc.) is (800) 526-5362.
 - ◆ PowrTwin™ (various models) including #4500, #5500 and #10000.
- C. **Equipment Accessories:**
 - ◆ Hose: 3/8 inch (9.53 mm) inside diameter (minimum), *1/2 inch (min.) on long runs.*
 - ◆ Guns: Graco Silver or Golden Hydra-mastic guns.
 - ◆ Tips: For SE-110 use 0.017 to 0.025 Reverse A Clean Tip, # 5-19 is often used.
For SE-120 use 0.019 to 0.035 Reverse A Clean Tip, # 5-21 is often used.

III. EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data sheets, including product technical bulletins, MSDS's and product instruction guidelines.

3.02 APPLICATION

- A. First application stabilizes and seals the surfaces. The application of a "Patch-Test" is required in the State of Massachusetts and always recommended to properly demonstrate the quality and value of the encasement methods. If product spray should occur on any surface *not intended to be coated*, wipe immediately to avoid staining or permanent adhering.
- B. For Metal Surfaces that rust:
 1. Use a non-corrosive, biodegradable, water soluble Chlor*Rid Pressure-Water Soluble-Salt Remover to prepare surfaces using wet removal techniques to remove all loose and flaking paint from the metal surfaces. Treat all surface areas at 1000 to 1500 PSI, and with particular attention to rusted areas. Use Chlor*Rid test kit and continue treatment until reading of 5 to 9 PPM remaining soluble-salts is measured in rusted areas. Use of a nylon brush to agitate Chlor*Rid/water solution over rusted areas helps prevent bleed-through. Allow to dry and coat with SE-110-CI immediately.
 2. Next, test the metal surfaces for chloride soluble salts (use CHLOR-TEST™ or an approved equal) testing kit. If found to be over 5 ppm, pressure wash with water plus addition of 1-gallon of CHLOR*RID per 300 to 1,000 square feet of surface to be blasted. Add 1-2% CHLOR*RID to the rinse water, rinse, allow to dry then re-test in worst areas to determine if salts-salts are treated.
 3. Apply one coat of SE-110-CI Penetrating-Stabilizer (primer with Corrosion Inhibitors) directly over all metal surfaces, applying two coats over corroded or rusted areas. Apply SE-110-CI at a coverage rate of 100 to 150 square foot per gallon, per coat (10 to 16 wet mils). This will dry to 5 to 7 dry mils of primer per coat. Allow to dry thoroughly before applying second coat or over-coating with SE-120 material.
 4. Next, apply SE-120 Protective-Skin topcoat material over dried primed surfaces. Apply at a coverage rate of 90 to 150 square feet per gallon per coat (10 to 18 wet mils) to produce 7 to 12 dry mils per coat of topcoat.
 5. If there's no visible rust and the paint is intact, you can use SE-110 (primer) and 120 topcoat materials directly following Chlor*Rid treatment.
- C. For Highly Weathered Wood and Damaged, Loose and Flaking Paint:
 1. Use a non-corrosive, biodegradable, water soluble SE-Industrial Cleaner (or approved equal) to prepare surfaces. Use wet removal technique to remove all excessive loose and flaking paint from the surfaces, break all bubbles, rinse clean and allow to dry. Option: Dust-free technique for removal of excessive loose damaged paint, apply a

- thin coat of SE-110 (as described in step 2 below) then selectively scrape off only the excessively loose paint. Then complete application of SE-110 as in step 2 below.
2. Apply two coats of SE-110 Penetrating-Stabilizer (primer) material directly over all surfaces including over damaged, loose and flaking paint or bare spots. On first coat, spray, brush, roller or cloth apply a thin coat (3 to 6 wet mils) of SE-110 material over all surfaces. *Use a wet mil gauge to determine proper wet coating thickness to yield the desired dry mil thickness.* Next use a short nap (1/2") roller to agitate the surface in both directions to level the SE-110. When SE-110 turns clear from milky-white color (30 to 60 minutes later) apply the balance of the SE-110 materials and work onto the loose and flaking areas so that a flat surface is formed. Apply at a coverage rate of 80 to 150 square foot per gallon (use more SE-110 material over rough and bare areas). *Allow primer coat to dry thoroughly before over-coating. SE-110 Penetrating-Stabilizer (primer) shrinks when it dries and dries to a clear tacky finish.*
 3. Where caulking is required to produce a smooth surface and/or to seal around windows, doors and seams, use compatible SE-151 Architectural Sealant (Urethane-Acrylic in tubes) or SE-150 100% Acrylic Sealant (trowel-able grade or in tubes). Patch damaged areas and surfaces, feathered edges as needed. Allow to dry before applying topcoat.
 4. Next apply one or two coats of Protective-Skin SE-120 topcoat materials over all the dry primed surfaces. Apply at a coverage rate of 90 to 150 square foot per gallon per coat (10 to 18 wet mils). This will produce 7 to 10 dry mils per coat. Allow to dry 2 to 6 hours before over-coating and dry overnight before removing tape. SE-120 topcoat materials dry to form a matte finish sandable surface. Where needed, SE-120 can be over-coated with SE-160 (Clear-Gloss) or SE-170 High-Gloss materials.
 5. To prevent damage to the coatings when removing all plastic and masking tape, use a utility knife to cut masking at painted edges.
 6. Prompt cleanup of equipment is recommended. Cleanup is with soap and water.
- D. SE-110 Penetrating-Stabilizer is a high solids engineered coating material (45% solids content – by volume). The liquid SE-110 material penetrates the surface, stabilizes old paint, and then shrinks as it dries, locking paint and dirt to the surface. Allow SE-110 to dry 2 to 4 hours before applying topcoats. *SE-110 shrinks as it dries to form a flexible surface film that becomes clear and remains tacky when dry.*
- E. *Coverage rate per gallon on SE-110 varies depending upon porosity, texture, condition of the surface, and the mil thickness specified.* Damaged, rough and highly textured surfaces require more material than flat, smooth or non-porous surfaces. Coverage rates for SE-110 applied over a smooth, flat surface at 100 sq. ft per gallon (16 wet mils) = 7 to 8 dry mils thickness. *For optimal estimating accuracy, the use of a Test Patch is required in MA and recommended elsewhere.* Typical coverage rates for SE-110 Penetrating-Stabilizer on various Treatment Zones (surfaces) are:
- Wood surfaces (in-tact paint) - 150 SF per gallon. (10 wet mils = 5 dry mils).
 - Over flat Transite surfaces - 100 to 200 SF per gallon (8-16 wet mils = 4-8 dry mils).
 - Porous or textured surfaces - 80 to 130 SF per gallon. (16-20 wet mils = 7-8 dry mils).
 - Rough, cementitious surfaces - 50 to 120 SF per gallon (12-32 wet mils = 7-8 dry mils)
 - Over textured stucco - 100 to 200 SF per gallon (8-16 wet mils = 4-7 dry mils).
 - Over aging wood siding - 80 to 150 SF per gallon (10-20 wet mils = 6-10 dry mils).
 - Over shingle siding - 80 to 140 SF per gallon (16-20 wet mils = 6-10 dry mils).
 - Over window frames - 90 to 140 SF per gallon (10-18 wet mils = 6-9 dry mils).
 - Over window sills & top surface on porch rails - 80 to 120 SF per gallon (12-20 wet mils = 6 to 10 dry mils), **DO NOT APPLY MATERIALS OVER FRICTION SURFACES.**
 - Over wood overhangs & porch ceilings - 90 to 150 SF per gallon (10-18 wet mils = 5 to 9 dry mils).
 - Over wood trim & posts - 80 to 150 SF per gallon (10-20 wet mils = 5 to 10 dry mils),
- F. SE-151 Architectural Sealant (or SE-150 trowel-able grade) will be used to weather-seal all corners of the building, repair areas on all surfaces, where old paint will create an uneven

finish – such as on the top board of the porch wall, and as needed to produce a smooth and stabilized surfaces.

- G. SE-120 Protective-Skin topcoat material is a 69% solids (by weight) content material. When spray applying SE-120, *use a wet mil gauge to determine proper wet coating thickness to yield the desired dry mil thickness.* Apply SE-120 in two passes with the second pass perpendicular (at 90°) to the first pass. The use of gentle back rolling the SE-120 topcoat material can be used on rough surfaces and can help to fill visible voids while conserving the use of materials. *A finished SAFE Encasement System shall be seamless and form a uniform, continuous, flexible coating that seals and completely encloses the painted surface.*
- H. Coverage rate per gallon varies depending upon porosity, texture, condition of the surface, and the mil thickness. Rough, highly textured surfaces require more material than flat or smooth surfaces. Calculated coverage rates for SE-120 topcoat on a flat, smooth surface at 100 sq. ft per gallon (applied @ 16 wet mils) = 9.7 dry mils per coat. *Some typical coverage rates for SE-120 Protective-Skin applied over various types of Treatment Zones (surfaces) are as follows:*
- Flat Transite surfaces - 140 to 150 SF per gallon (10-12 wet mils = 7-9 dry mils),
 - Porous or textured surfaces - 100 to 140 SF per gln. (12-16 wet mils = 7-10 dry mils),
 - Rough, cementitious surface - 80 to 120 SF per gln. (14-18 wet mils = 7-10 dry mils),
 - Over rough, irregular surfaces - 60 to 120 SF per gln (16-26 wet mils = 8-15 dry mils),
 - Over stucco - 80 to 120 SF per gallon (12-18 wet mils = 8-9 dry mils),
 - Over wood siding - 120 to 140 SF per gallon (10-14 wet mils = 6-9 dry mils per coat),
 - Over shingle siding - 90 to 120 SF per gallon (10-19 wet mils = 7-9 dry mils per coat),
 - Window frames - 100 to 140 SF per gallon (12-16 wet mils = 8-9 dry mils per coat),
 - Window sills & top surface of porch walls - 100 to 120 SF per gallon (12-16 wet mils = 7-9 dry mils per coat),
 - Over wood overhangs & porch ceiling - 140 to 150 SF per gallon (10-12 wet mils = 7-8 dry mils per coat),
 - Wood trim & posts - 130 to 150 SF per gln (10-12 wet mils = 7-8 dry mils per coat),
 - Over porch floor - 120 to 140 SF per gallon (12-14 wet mils = 7-9 dry mils per coat) coats, for slip resistance sand is sprinkled over the second coat while wet. *Allow to dry for two days, then top coat with SE-170 High Gloss – 120 to 140 sq. ft. per coat (4-6 dry mils) – 2 coats,*
 - Recommended 12 to 18 dry mil thickness is required for 20-Year Limited Product Warranty.
- H. To prevent damage to the coatings when removing all plastic and masking tape, use a utility knife to first cut at coating edges. . Under normal drying conditions, SAFE Encasement materials develop their full strength and chemical resistance properties 3 to 14 days following application. The circulation of air helps water-based materials to dry more rapidly. Follow all applicable state and/or federal OSHA Guidelines.

3.03 FIELD QUALITY REQUIREMENTS

- A. Manufacturer's Field Services: Inspection by a SAFE Encasement Authorized Sales Representative shall be made to verify the proper installation of the system. Any areas that do not meet the minimum standards for application as specified herein shall be corrected at the contractor's expense. SAFE Encasement's inspection or verification shall not constitute acceptance of responsibility for any improper application of material.
- B. **Disclaimer:** SAFE Encasement's employees and/or Authorized Sales Representatives are not responsible for any liabilities resulting from the application or use of these materials.

3.04 CLEANING

- A. Use soapy water. Immediately wipe surfaces not to be coated to prevent drying. Surfaces not intended to receive the SAFE Encasement System shall be protected during the application of the system. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing or replacing. All debris from completion of work shall be completely removed from the project site.

IV. MATERIALS

The following materials listed in these recommendations are available from SAFE Encasement Systems:

1. SE-IC Industrial Cleaner (concentrate).
2. CHLOR*RID Rinse Additive and CHLOR-TEST kits.
3. SE-110 Penetrating-Stabilizer (primer).
4. SE-110-CI Penetrating Stabilizer (primer) with Corrosion Inhibitors.
5. SE-120 Protective-Skin (topcoat) white or custom color (Mold & Mildew Resistant).
6. SE-150 Architectural Sealant - 100% acrylic trowelable grade.
7. SE-151 Urethane-Acrylic Sealant (tubes),
8. SE-310 Topcoat (satin finish topcoat) white or custom color.
9. SE-160 Topcoat (clear) high gloss topcoat.
10. SE-170 High Gloss, Mold & Mildew Resistant Surface Coating (white).

You can download any Product Data Sheet or MSDS
at our web site: www.safeencasement.com/

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