

Series 130 Envirofill Surface Preparation & Application Guide

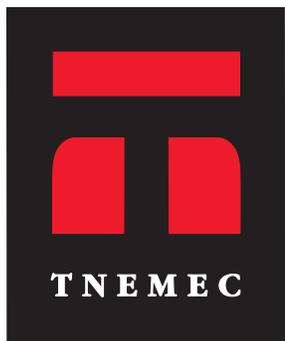


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1.0 INTRODUCTION

This application guide is used in conjunction with the appropriate product data sheets and addresses the application of:

- Series 130 Envirofill - cementitious-acrylic masonry filler
- Series 130-6603 Envirofill PC - cementitious-acrylic masonry patching compound

This guide has been prepared as a reference to help assure that every project achieves optimum results. If you have any questions or need more information, contact your local Tnemec representative or call Tnemec Technical Service at 1-800-TNEMEC1.

2.0 PRODUCTS AND PACKAGING

2.1 SERIES 130 ENVIROFILL

Series 130 Envirofill is a modified, cementitious, acrylic masonry filler designed for the purpose of filling surface voids in concrete masonry units (CMU). It is a high-performance, high-solids water-based product that can be topcoated with a variety of Tnemec topcoats. Series 130 Envirofill is not recommended for previously painted surfaces.

Low odor, ease of application and VOC compliant (0.63 lbs/gal. or 75 g/L) make this product ideally suited for new construction and renovation applications. It is used on properly prepared precast and poured-in-place concrete as well as concrete masonry units. Its ability to provide a dense foundation for high-performance coatings makes it well suited for specialized architectural and moderately severe industrial applications.

Uses include schools, colleges, hospitals, correctional facilities, food and beverage and pharmaceutical plants; and other similar environments found in manufacturing and industrial facilities.

130 PACKAGING

KIT SIZE	PART A (LIQUID)	PART B (POWDER)	PART C (PLASTIC BOTTLE)	YIELD (MIXED)
Large Kit	6 gallon pail	3-1/2 gallon pail	4 oz.	5 gallon (18.9 L)
Small Kit	1 gallon pail	1/2 gallon pail	1 oz.	1 gallon (3.79 L)



130 COVERAGE RATES

	SMALL KIT	LARGE KIT
CONCRETE AND MASONRY BLOCK	85 - 115 sq. ft.	425 - 575 sq. ft.
CONCRETE AND HAYDITE BLOCK	60 - 80 sq. ft.	300 - 400 sq. ft.

Note: Allow for application losses due to surface irregularities and substrate porosity. Application below minimum or above maximum spreading rates may adversely affect coating performance. Maximum performance is obtained when the coating is applied to form a continuous, void-free film.

2.2 SERIES 130-6603 ENVIROFILL PC

Series 130-6603 Envirofill PC is a modified acrylic patching compound often used in conjunction with Series 130 Envirofill to patch voids in concrete and masonry surfaces that are larger than 1/8" and up to 1/2" deep and 2" in diameter. Series 130-6603 Envirofill PC is not recommended for previously painted surfaces, nor is it designed to be used as a surfacer. Envirofill PC is easy to apply, VOC-compliant and has very little odor.

130-6603 PACKAGING

KIT SIZE	PART A (LIQUID)	PART B (POWDER)	YIELD (MIXED)
Small Kit .810 gallon	1 gallon pail	1/2 gallon pail	(3.07 L)
Touch-up Kit	32 oz. wide mouth plastic jar	8 oz. wide mouth plastic jar	.205 gallon (.78 L)

130-6603 COVERAGE RATES

Touch-up kit: approximately 32 cubic inches
Small kit: approximately 128 cubic inches

3.0 PRE-JOB INSPECTION

Prior to the start of application, the surface to be coated should be examined. Some helpful hints regarding optimum conditions prior to application are as follows:

CONCRETE BLOCK

The blocks should be plumb and even, with all cuts neatly and accurately made. The block should have a uniform texture with no cracks, holes or other defects. The joints should be struck uniformly, with all mortar tags and foreign matter removed.

The mortar should provide a good bond and there should be no cracking or excess mortar on the face of the blocks. The age of the mortar joints should be a minimum of 14 days.

POURED CONCRETE

The surfaces should be relatively smooth with no exposed aggregate or cracks. All form marks and other protrusions should be removed. The age of the concrete should be a minimum of 14 days.

4.0 SURFACE PREPARATION

All surfaces must be clean and free of grease, oil, dirt, excessive moisture, or other foreign contaminants. Allow all new concrete to cure 14 days. Series 130 Envirofill and Series 130-6603 Envirofill PC are not recommended for previously painted surfaces.

4.1 CONCRETE BLOCK - SERIES 130 ENVIROFILL

Grease, oil, dirt, mud, construction markings and other contaminants should be removed by scraping off heavy deposits followed by scrubbing thoroughly with suitable solvent. Follow the solvent cleaning by scrubbing with a tri-sodium phosphate (TSP) solution consisting of 0.25 lbs. TSP to each gallon of hot water. Rinse thoroughly with clean tap water.

Minor surface contamination and blemishes such as mortar spatter, small fins, efflorescence and protrusions can be knocked off with a scraper or rough sandpaper. Loose contamination may be removed from walls and ceilings by blowing off with clean, compressed air in excess of 90 psi or by vacuum cleaning. Voids, bugholes and other cavities between 1/8" and 1/2" in depth and no more than 2" in diameter should be filled with Series 130-6603 Envirofill PC.

If the wall has recessed mortar joints and a flush, smooth wall is desired, grout the joints with Series 216 Quickfill or Series 218 MortarClad. In some instances the entire wall can be surfaced with Series 216 Quickfill or Series 218 MortarClad. Contact your Tnemec representative for more information.

4.2 CONCRETE BLOCK - SERIES 130-6603 ENVIROFILL PC

Level protrusions and mortar spatter in and around the area to be filled with a rubbing stone or grinder.

POURED CONCRETE WALLS AND CEILINGS

Grease, oil, dirt, mud, construction markings and other contaminants should be removed by scraping off heavy deposits followed by scrubbing thoroughly with suitable solvent. Follow the solvent cleaning by scrubbing with a tri-sodium phosphate (TSP) solution consisting of 0.25 lbs. TSP to each gallon of hot water. Rinse thoroughly with clean tap water.

Form release agents, laitance, curing agents, surface hardeners, bond breakers or other chemically-curing compounds must be removed by wet or dry abrasive blasting or, in the case of small areas, an effective mechanical means such as a brush hammer or needle gun. The surface should have a roughened appearance; some aggregate may be exposed and bugholes should be opened. Protect nearby inhabited spaces and HVAC systems from airborne contamination.

Minor surface contamination and blemishes such as mortar

spatter, small fins, efflorescence and protrusions can be knocked off with a scraper or rough sandpaper. Loose contamination may be removed from walls and ceilings by blowing off with clean, compressed air in excess of 90 psi or by vacuum cleaning. Voids, bugholes and other cavities between 1/8" and 1/2" in depth and no more than 2" in diameter should be filled with Series 130 Envirofill PC.

5.0 APPLICATION PREPARATION CHECKLIST

The following checklist is provided to help assure everything goes smoothly once the job begins.

1. Verify the entire shipment of Tnemec coatings is either in your possession or at the jobsite. An adequate supply of clean water should be available for thinning and clean-up.
2. Verify the containers are sealed in good condition and labels are legible.
3. Verify the coating materials have not exceeded their shelf life.
4. Verify the coating materials are stored in accordance with Tnemec's latest printed instructions. The containers should be protected from damage, moisture, direct sunlight and extreme temperatures. If there is a material problem, contact your Tnemec representative immediately.
5. Verify equipment is available that can supply and maintain sufficient heat, if needed, to assure substrate and air temperature of 50°F to 120°F during the entire coating application.
6. Arrive at the jobsite with the necessary equipment and manpower required for the project. Make sure spray guns, pumps, pressure pots, hoses, gauges, etc. are clean and in good working order. Test your compressed air before arriving at the jobsite to make sure it is not contaminated with oil or moisture. (See APPLICATION AND EQUIPMENT section on the following page.)
7. Make sure the work area is adequately ventilated. Water-based coating materials contain very little co-solvent, but quantities may be sufficient to cause respiratory problems unless adequate ventilation is provided.
8. Surfaces adjacent to areas that will receive Series 130 Envirofill should be masked or covered to protect them from dust or overspray. The edge of the masking tape that is adjacent to the surface to be coated should be removed as soon as Series 130 Envirofill has set. Masking must be repeated for each additional coat in the coating system. All floors, regardless of type, should be covered completely in any area where spills, splatters or overspray can accumulate.

6.0 APPLICATION EQUIPMENT SERIES 130 ENVIROFILL AND SERIES 130-6603 ENVIROFILL PC

This list includes tools and supplies normally required for mixing and application of Series 130 Envirofill and Series 130-6603 Envirofill PC.

6.1 SERIES 130 ENVIROFILL:

- Spot patch holes and cracks with a putty knife
- Air or airless spray equipment, brush or roller as follows:

NOTE: For the smoothest achievable finish, follow all methods of application by using a rubber squeegee or foam/cork float to remove excess material.

AIR SPRAY

Gun	DeVilbiss JGA
Fluid Tip	D
Air Cap	64
Air Hose ID	5/16" or 3/8" (7.9 or 9.5 mm)
Mat'l Hose ID	3/8" or 1/2" (9.5 or 12.7 mm)
Atomizing Pressure	40 - 50 psi (2.8 - 3.4 bar)
Pot Pressure	20 - 30 psi (1.4 - 2.1 bar)

AIRLESS SPRAY

Pump	Graco 35 to 1 Senator or larger Min. 1.5 GPM rating
Tip	0.031" - 0.035" (785 - 890 microns) Reversible tip
Atomizing Pressure	2400 - 3000 psi (165 - 207 bar) minimum
Mat'l Hose ID	3/8" (9.5 mm)

Use appropriate tip and atomizing pressure for equipment, applicator technique and weather conditions. Remove all filters. If pump pulsation (surging) occurs, equip pump with Graco Model 214-623 Surge Tank without filter or equivalent.

Roller Recommendations: Use a high-quality, synthetic cover; 1" to 1-1/2" is recommended for most porous block. Use shorter nap for smoother appearance before topcoating.

Brush Recommendations: A nylon brush is recommended.

6.2 SERIES 130-6603 ENVIROFILL PC:

- Power mixer such as a Jiffy mixer
- Putty knife, broad blade or pointed trowel
- Rubber squeegee or foam/cork float if a smoother finish is desired

7.0 MIXING AND APPLICATION

7.1 SERIES 130 ENVIROFILL

MIXING

Slowly pour the Part C liquid into the Part A liquid while under agitation. After the Part C is thoroughly mixed into the Part A, slowly sift in the Part B powder. Do not change the order of this procedure. Use a power mixer, such as a Jiffy mixer, keeping the material under constant agitation while adding the powder. Mix until the material is free of lumps and the components are thoroughly blended. Caution: When mixing in plastic pail, use a mixing blade that will not gouge the plastic container. Sharp mixer blades may nick off particles of a plastic pail and cause plugging of the spray gun. After mixing, the material may thicken or gel if not agitated. Remixing the material will return it to a fluid state. Do not use the mixed material beyond pot life limits.

APPLICATION

The surface temperature should be between 50°F and 120°F. In hot or windy weather, it may be desirable to dampen the substrate prior to the Series 130 Envirofill application. Use clean tap water applied by a garden hose or pressure pot. Wet the surface to a deep, uniform color. The substrate must not be running with water.

There are several methods by which to apply the Series 130 Envirofill. The method employed will depend on the condition of the concrete block or the poured concrete, and the desired appearance.

Method A - Spray and Backroll
Method B - Spray, Backroll and Squeegee
Method C - Roll
Method D - Roll and Squeegee
Method E - Brush (for small areas only)

Regardless of the application method used, a smoother surface can be obtained by lightly pole sanding after the material has dried and prior to topcoating.

Methods A and B

Spray Application - Backroll material immediately after spray application to force the material into voids and hairline cracks. Use a high-quality, synthetic cover; 1" to 1-1/2" is recommended for most porous block. Use shorter nap for smoother appearance before topcoating. Use the appropriate tip and atomizing pressure for equipment, applicator technique and weather conditions. Remove all filters. If pump pulsation (surging) occurs, equip the pump with Graco Model 214-623 Surge Tank without filter or equivalent. Squeegee to force the material into pores and to provide a smoother surface.

Methods C and D

Roller apply, working the material thoroughly into the pores. While the material is still wet, remove the excess with a rubber squeegee so the face of the surface is smooth and free of build-up.

Method E

Apply with nylon brush. Work the material into the voids. Squeegee to obtain a smoother surface.

7.2 SERIES 130-6603 ENVIROFILL PC
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MIXING

Slowly sift the Part B powder into Part A liquid. Do not reverse this procedure. Use a power mixer capable of adequately blending high viscosity materials. Dual or multi-blade agitators are recommended. Keep the product under constant agitation while adding the Part B powder. Mix thoroughly until the powder is completely wetted and the material is free of lumps.

APPLICATION

The surface temperature should be between 50°F and 120°F. In hot or windy weather, it may be desirable to dampen the substrate with clean water prior to the Series 130 Envirofill PC application. Do not overly saturate.

Spot patch holes and cracks with a putty knife, broad blade or pointed trowel. Follow with a rubber squeegee or foam/cork float if a smoother finish is desired. Do Not apply to small pores and imperfections in the block walls. Instead, use Series 130 Envirofill prior to topcoating. Series 130 Envirofill PC can be topcoated in 6 to 12 hours, depending on the topcoat to be used and the environmental conditions.

8.0 TOPCOATING
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DETERMINING READINESS FOR TOPCOATING

When thoroughly dry and hard, Series 130 Envirofill is ready for topcoating. This will require 18 hours minimum, depending on environmental conditions and film build. There should be no shadows, moist spots or soft areas. Nibs, fins or excessive stipple created during application can be smoothed by sanding. Examine thoroughly to make sure there are no skips or pinholes. These areas must be touched up or they may have adverse effects on the topcoat. Use the accepted test standard as your acceptance criteria and allow for any inspection required by the client or general contractor.

Depending on the depth of the patch, environmental conditions and the topcoat to be used, Series 130 Envirofill PC is ready to recoat in 6 to 12 hours after application. Series 130 Envirofill and Series 130-6603 Envirofill PC are compatible with several high-performance Tnemec topcoats. Refer to the Series 130 Envirofill or Series 130-6603 Envirofill PC Product Data Sheet for recommended topcoats.

9.0 CLEAN-UP
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Clean all equipment immediately with warm water. Trowels and squeegees can be wetted occasionally during application with clean tap water to aid in the transfer of material and prevent build-up.

10.0 STORAGE AND HANDLING
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All materials must be stored between 35°F and 110°F. For optimum application, handling and performance, the surface, air and material temperatures during application should be between 50°F and 120°F. The surface and air temperatures should be at least 5°F above the dew point.

11.0 SAFETY INFORMATION
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Adequate health and safety precautions should be observed during storage, handling, application and curing. For information regarding the potential hazards associated with these products, please refer to the container label or request a Material Safety Data Sheet from Tnemec Company, Inc. at the address noted in this guide. Please direct your inquiries to the Environmental Director.

