

Eco-PT™ 250

Epoxy Mortar System



DESCRIPTION – Overlay is a three-component filled, high solids epoxy system for resurfacing eroded interior concrete floors. Grout coat is a two-component, high solids epoxy for sealing the overlay.

- **LEED® v4** – Indoor Air Quality credits available.
 - Meets requirements per CDPH-CA Section 01350 Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental chambers Version 1.2.

ENVIRONMENTALLY & USER FRIENDLY

- Reduced solvent means less evaporation and less waste.
- Low Odor. Can be applied during normal business hours.
- Complies with SCAQMD VOC regulations--<100 g/L.

PRIMARY APPLICATIONS (with urethane topcoat)

Hangar Floor	Manufacturing
Automotive Manufacturing	Assembly / Production
Battery Charging Area	Clean Rooms / Labs

APPLICATION COVERAGE RATE

Coverage Rate, ft ² [m ²] per 3-bag mix	56-70 [5.2-6.5]
Application Thickness, inches [mm]	1/4-3/16" [6.35-4.76]

MATERIAL PROPERTIES (LIQUID)

Property	Test Method	Results
Percent Solids, by wt [by vol]	ASTM D2369	A+B+C = 99.52 [98.8]
Volatile Organic Compound, VOC, lb/gal [g/L]	ASTM D3960	A+B+C = 0.09 lb/gal [11 g/L]

CURED COATING PROPERTIES (DRY FILM)

Property	Test Method	Results
Coefficient of Friction - COF James Friction Tester	ASTM D2047	0.60-0.63 (with 2 coats of Eco-PT Topcoat)
Coefficient of Thermal Linear Expansion mm/mm/°C	ASTM D696	1.97x10 ⁻⁵
Adhesion to Concrete, psi [MPa]	ASTM D4541	732 [4.48] (concrete failed)
Adhesion to Concrete, psi [MPa]	ASTM D7234	450 [3.10] (concrete failed)
Compressive Strength, psi [MPa]	ASTM C579	10,000 [68.95]
Flexural Strength, psi [MPa]	ASTM D790	3,700 [25.51]
Flexural Modulus of Elasticity, psi [MPa]	ASTM D790	1.8x10 ⁶ [0.01x10 ⁷]
Heat Deflection Temperature, psi [MPa]	ASTM D648	140°F (60°C) @ 264 [1.82] load 151°F (66°C) @ 66 [0.46] load
Izod Impact Strength lb/in [N/m]	ASTM D256	0.26 [45.53]
Tensile Strength, psi [MPa]	ASTM C307	1,690 [11.65]
Shore D Hardness	ASTM D2240	80-85 @ 0 sec / 75-80 @ 15 sec

Results are based on conditions at 77°F (25°C)

GENERAL PRODUCT INFORMATION

STORAGE: Materials should be stored indoors between 65°F [18°C] and 90°F [32°C].

SHELF LIFE: One year from date of manufacture.

PACKAGING OPTIONS / PART NUMBERS:	Eco-PT™ 250	Eco-PT™ Topcoat
	900 sq. ft. / 60690 11,700 sq. ft. / 60690BLK	3.0 gallons (11.34 litres) / 370516

OPTIONS: Colors in Eco-PT 250: Use colorants at a rate of ¼ pint (½ cup, 4 ounces, 18.29 milliliters) per 3-bag mix. Standard Colorants--White, Light Gray and Yellow Red will not impart total hide. Use these colorants at a rate of ½ pint (1 cup, 8 ounces, 236.59 milliliters) per 3-bag mix.
Colors in Eco-MPE and Eco-PT Topcoat: Use Colorants at a rate of one unit per 3-gallon (11.34 litres) mix. Standard Colorants--White, Light Gray and Yellow will not impart total hide. Use these colorants at a rate of 2 units per 3-gallon (11.34 litres) mix.
Cove: A seamless, smooth transition can be created between the flooring and wall. Call Technical Support for assistance or see bulletin on Cove Installation.

LIMITATIONS: Contamination (Fisheyes): Product may fisheye if oil, silicones, mold release agents or other contaminants are present.

CHEMICAL RESISTANCE PROPERTIES

Eco-MPE Neutral	1 Day	7 Days	Eco-MPE Neutral	1 Day	7 Days
Acids, Inorganic			Solvents (Aromatic)		
10% Hydrochloric Acid	E	E	Xylene	F	F
30% Hydrochloric Acid (Muriatic)	E	G	Solvents (Chlorinated)		
10% Nitric Acid	E	G	Methylene Chloride	P	P
50% Phosphoric Acid	F	G	Solvents (Ketones & Esters)		
37% Sulfuric Acid (Battery Acid)	G	G	Methyl Ethyl Ketone (MEK)	P	P
Acids, Organic			Propylene Glycol Methyl Ether Acetate (PMA)	F	F
10% Acetic Acid	G	F	Miscellaneous Chemicals		
10% Citric Acid	G	G	20% Ammonium Nitrate	E	E
Oleic Acid	G	F	Brake Fluid	F	F
Alkalies			Bleach	E	E
10% Ammonium Hydroxide	E	E	Motor Oil (SAE 30)	E	E
50% Sodium Hydroxide	E	E	Skydrol® 500B	F	F
Solvents (Alcohols)			Skydrol® LD4	F	F
Ethylene Glycol (Antifreeze)	E	G	20% Sodium Chloride	E	E
Isopropyl Alcohol	F	P	1% Tide® Laundry Soap	E	E
Methanol	F	F	10% Trisodium Phosphate	E	E
Solvents (Aliphatic)					
d-Limonene	G	G			
Jet Fuel - JP-4	E	E			
Gasoline	G	G			
Mineral Spirits	E	E	Registered trademarks: Tide® of Proctor and Gamble and Skydrol® of Solutia, Inc.		

ASTM D1308 Test Method 3.1.1 spot test, covered. Results are based on 1-day and 7-day. Coating cured 2 weeks prior to testing.

Legend:

E - Excellent (No Adverse Effect) - Recommended.

F - Fair (Moderate Adverse Effect) - Not recommended.

G - Good (Limited Adverse Effect) - Use for short-term exposure only.

P - Poor (Unsatisfactory) - Little or no resistance to chemical.

*Only adverse effect was staining.

NOTE: *Reduced chemical resistance and staining is possible in pigmented versions of the system.*

IMPORTANT: READ AND FOLLOW ALL PRECAUTIONS AND INSTRUCTIONS BEFORE PROCEEDING.

**PLEASE SEE SAFETY DATA SHEET (SDS) FOR HANDLING PROCEDURES.
USE PRODUCT AS DIRECTED.
KEEP OUT OF THE REACH OF CHILDREN.**

PRELIMINARY FLOOR INSPECTIONS

CHECK THE CONCRETE: Concrete must be structurally sound and free of curing membrane, paint or other sealer. If you suspect that the concrete has been previously sealed, call Tennant Company, technical support for further instructions.

CHECK FOR MOISTURE: Concrete must be dry before application of this floor coating material. Concrete moisture testing must occur. In-situ relative humidity testing is recommended. Readings must be below 77% relative internal concrete humidity. Test methods can be purchased at www.astm.org, see F2170, or follow manufacturer's instructions. If moisture issues are present, the use of a moisture mitigation system may be a consideration. Please call Tennant Company Technical Support for further information / instructions.

NOTE: Although testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or the vapor barrier is not functioning properly and/or you suspect you may have concrete contamination from oils, chemical spills or excessive salts.

CHECK THE TEMPERATURE AND HUMIDITY: Floor temperature and materials should be between 65°F (18°C) and 90°F (32°C). Humidity must be less than 80%. **DO NOT** coat unless floor temperature is more than five degrees over the current, local dew point.

APPLICATION EQUIPMENT

<ul style="list-style-type: none"> Protective clothing Jiffy® mixer blade [Tennant Part No. 08643-1 (1 gal) or 08643-5 (5 gal)] Slow speed drill (500 rpm or less) 18-24" (457.2-609.6 mm) Flat rubber squeegee Mortar mixer Screed box Trowel (stainless steel, 3" x 12" (76.2 x 304.8 mm)) Epoxy power trowel with combination blades 	<ul style="list-style-type: none"> 18-24" 1/16" Notched squeegee Roller assembly (18") Medium (3/8") nap roller Spiked shoes Application tray Disc machine 100 grit sandpaper Push broom and/or vacuum
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ASSEMBLE EQUIPMENT: Due to the limited pot life of the material, all application equipment, etc. should be ready for immediate use. (Clean roller with tape to remove any residual lint.)

PREPARATION

Detergent scrub and rinse with clean water to remove surface dirt, grease, oil and contaminants.

Steel shot blast (minimum shot size of 330): Use magnetic broom to remove excess shot, sweep to remove large debris and vacuum to remove fine dust.

Key in all termination points.

Patch all depressions, divots and stress cracks in concrete with thickened epoxy to reduce the ability to see the defect through the decorative system.

JOINTS: For a seamless appearance, joints need to be filled. Contraction or control joints can be filled with a semi-rigid joint filler such as Eco-PJF™ or Eco-EJF™. Ensure the joints are clean by running a saw equipped with a diamond blade and vacuum to remove any debris. Construction joints less than one inch wide may also be filled with Eco-PJF. Cracking of the resurfacer will occur over joints that are overlaid and later move. Because resurfacers are not flexible, joints that might move should be honored (cut) after the installation and filled with Eco-PJF or Eco-EJF. Isolation joints must be honored and filled with a flexible material designed for this purpose.

APPLICATION PRIMER – ECO-MPE

Eco-PT 250 is applied over Eco-MPE primer that is still wet or sticky--within 4 hours. It is critical that all concrete is covered to ensure proper adhesion of the overlay.

NOTE: *The kits come with enough Eco-MPE to prime at 180-220 sq. ft. per gallon (16.7-20.4 m² per 3.78 litres) for ¼" (6.35 mm) Eco-PT 250 applications. If Eco-PT 250 is being put down at 3/16" (4.76 mm) and/or the floor is extremely porous or rough, additional primer will be needed.*

A thin coat of primer will wet out concrete, help seal off concrete pores and minimize outgassing bubbles. Apply a tight coat of primer with a clean, flexible squeegee. There should be no mil build over the high spots of the concrete.

COVERAGE RATE: Much of this will soak into porous concrete. One gallon (3.78 litres) of Eco-MPE will cover:
220 ft² (20.4 m²) at 7 mils (0.18 mm) wet/dry film
200 ft² (18.6 m²) at 8 mils (0.20 mm) wet/dry film
180 ft² (16.7 m²) at 9 mils (0.23 mm) wet/dry film

PREMIX PART A using a Jiffy® mixer blade and slow speed drill. (This is required for both 3-gallon (11.34 litres) and full-filled 5-gallon (18.9 litres) units.) For full-filled 5 gallon pails (18.9 litres), pour out 2 gallons (7.56 litres) into a measuring container. Then, pour the measured Part A into a mixing pail.

ADD ECO-MPE PART B TO PART A (3 GALLONS / 11.34 LITRES TOTAL MIX). For full-filled 5-gallon pails (18.9 litres), pour out 1 gallon (3.78 litres) Part B into a measuring container that is separate from the one used with the Part A. Then, add the measured Part B to the Part A already in the mixing pail. **POTLIFE:** *Mix only enough material which can be applied within the work time (time between the addition of Part B to Part A and the completion of all application actions). Check the following chart for work times at various temperatures. For smaller quantities, use 2 parts PART A to 1 part PART B by volume.*

APPROXIMATE WORK TIME (minutes) - °F (°C)

65 (18.3)	70 (21.1)	75 (23.9)	80 (26.7)	90 (32.2)
40	30	25	20	15

MIX FOR 2 MINUTES using a Jiffy® mixer blade and slow speed drill. (Failure to do so could result in lower/diminished coating properties.)

POUR INTO APPLICATION TRAY. **NOTE:** *Squeegee/backroll application technique may require additional epoxy on a rough, porous floor.*

DIP ROLLER AND APPLY MATERIAL at the desired coverage rate.

APPLICATION – MORTAR – ECO-PT 250

Eco-PT 250 is applied over Eco-MPE primer that is still wet or sticky--within 4 hours. It is critical that all concrete is covered to ensure proper adhesion of the overlay.

COVERAGE RATE will depend upon thickness. A three bag mix of Eco-PT 250 will nominally cover (finished floor):
56 ft² (5.2 m²) at 1/4" (6.35 mm)
70 ft² (6.5 m²) at 3/16" (4.78 mm)

PREMIX ECO-MPE PART A using a Jiffy® mixer blade and slow speed drill. For full-filled 5-gallon (18.9 litres) units, pour out 1 gallon (3.78 litres) into a measuring container. Then, pour the measured Part A into a mixing pail.

COLORS: Premix Tennant Colorant before adding to Eco-MPE to ensure uniform color. Pour out ¼ pint (½ cup, 4 ounces, 18.29 milliliters) into a measuring container. Add colorant to Eco-MPE Part A and mix using a Jiffy® mixer blade and slow speed drill.

POUR THREE BAGS OF PART C into the mortar mixer. Begin mixing.

ADD ECO-MPE PART B (0.50 gallon / (1.89 litres) TO ECO-MPE PART A (1.00 gallon / 3.78 litres). **POTLIFE:** *Mix only enough material which can be screeded and troweled in a 15 minute period.*

MIX FOR 1 MINUTE or until thoroughly mixed using the Jiffy® mixer blade and slow speed drill.

POUR THE MIXED PARTS A AND B into the mortar mixer. Mix until uniform (approximately one minute). The resin needs to only wet out the sand.

POUR THE MIXED MATERIAL into the screed box.

To achieve a 1/4" (6.35 mm) finished floor, set the screed box at 5/16" (7.94 mm).

To achieve a 3/16" (4.78 mm) finished floor, set the screed box at 1/4" (6.35 mm).

NOTE: *If the material is too thick, it will be more difficult to level.*

SCREED material over desired area. **NOTE:** *The use of spiked shoes will allow freedom of movement on the unfinished overlay.* **CAUTION:** *The surface will be slippery.*

USE HAND TROWELS for edges and touch up.

POWER TROWEL MATERIAL to compact and achieve finished texture with an epoxy power trowel (<50 rpm) as soon as possible.

ALLOW RESURFACER TO CURE 6-8 hours [at 75°F (24°C)] before sealing. Allow more time at low temperatures.

USE OF A TERRAZZO GRINDER OR SURFACE GRINDER to remove high spots and ensure a continuous surface is highly recommended. Vacuum up the loose material.

APPLICATION – GROUT COAT – ECO-PT™ TOPCOAT

Eco-PT 250 must be sealed with one coat of Eco-PT Topcoat (see product guide for application instructions).

TECHNICAL SUPPORT

For any preparation or application questions, please call Tennant technical support at 800-228-4943, option 3 (US & Canada), 800-832-8935 (International).

DISPOSAL

Dispose of all excess material, packaging and other waste in accordance with federal, state and local regulations.

MAINTENANCE GUIDELINES

Allow floor coating to cure at least one week before cleaning by mechanical means (e.g., sweeper, scrubber, disc machine).

Care: Proper maintenance will increase the life and help maintain the appearance of your new Tennant floor coating. Sweep and scrub your new coating regularly, as dirt and dust are abrasive and can quickly dull the finish, decreasing the life of your coating. Remove spills quickly as certain chemicals may stain and could possibly permanently damage the finish.

Use soft nylon brushes or white pads on your new floor coating. Any brush more abrasive than a soft nylon or white pad can cause premature loss of gloss.

Detergent: Tennant has a full range of detergents--general purpose to heavy duty--for your cleaning needs. For assistance in determining which detergent is right for your facility or for additional technical information call: 800-228-4943, option 3 (US & Canada), 800-832-8935 (International).

Caution: Avoid scratching or gouging the surface. All floor coatings will scratch if heavy objects are dragged across the surface.

Do not drop heavy or pointed items on the floor as this may cause chipping or concrete popouts in the case of a weak cap.

Rubber tires can permanently stain the floor coating from plasticizer migration. Plexiglass® between the tire and the floor coating can prevent discoloration.

Rubber burns from quick stops and starts can heat the coating to its softening temperature, causing permanent marking.

Repair: Repair gouges or scratches or chip outs as soon as possible to prevent moisture or chemical contamination.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

Tennant offers a limited warranty on all products. Please see the Tennant Coatings Limited Product Warranty Statement on our website at www.tennantcoatings.com/warranty. Please contact the Tennant Coatings Technical Support team for additional questions at 800-228-4943, option 3 (US & Canada), 800-832-8935 (International).