



ECOfit & ECOfit Plus Rolls

TECHNICAL MANUAL

Installation • Maintenance • Warranty

Manufactured in the U.S.A.

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Supersedes all previous versions.
Check website for updates.

Installation

Job Site Conditions	2
Subfloors	2
Subfloor Preparation	2
Storage & Handling	3
Installation Prep & Installation	4

Maintenance

Floor Protection & Assigned Responsibilities	5
Cleaning Procedures / ECOguard Coated	6
E-Finish	7
Prep	7
Application	7
Cleaning and Stripping	8

Warranty

Warranty	9
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I. JOB SITE CONDITIONS

- A. Installation should not begin until after all other trades are finished in the area. If the job requires other trades to work in the area after the installation of the floor, the flooring should be protected with an appropriate cover.
- B. Areas to receive flooring should be weather tight and maintained at a minimum uniform temperature of 65° F (18° C) for 48 hours prior to, during, and after installation.

II. SUBFLOORS

- A. **ECOfit and ECOfit Plus** rolls may be installed over concrete, Portland-based patching and self-leveling materials, and wood.

Note: Gypsum based patching and leveling compounds are not acceptable.

Note: The selected Portland-based patching and self-leveling materials must be moisture resistant and rated to withstand the RH moisture levels on the project.

- B. Wood Subfloors: Wood subfloors should be double construction with a minimum thickness of 1". The floor must be rigid, free from movement, and have at least 18" of well-ventilated air space below.
- C. Underlayments: The preferred underlayment panel is APA underlayment grade plywood, minimum thickness of 1/4", with a fully sanded face.

Note: Particle board, chipboard/OSB, Masonite, and lauan are not suitable underlayments.

- D. Concrete Floors: Concrete shall have a minimum compressive strength of 3000 psi. It must be fully cured and permanently dry.
- E. ECOfit and ECOfit Plus rolls are not suitable for installation over radiant heat

III. SUBFLOOR REQUIREMENTS AND PREPARATION

- A. Subfloor shall be dry, clean, smooth, level, and structurally sound. It should be free of dust, solvent, paint, wax, oil, grease, asphalt, sealers, curing and hardening compounds, alkaline salts, old adhesive residue, and other extraneous materials, according to ASTM F710.
- B. Subfloor should be smooth to prevent irregularities, roughness, or other defects from telegraphing through the new flooring. The surface should be flat to the equivalent of 3/16" (4.8 mm) in 10 feet (3.0 m).
- C. Mechanically remove all traces of old adhesives, paint, or other debris by scraping, sanding, or scarifying the substrate. Do not use solvents. All high spots shall be ground level and low spots filled with a Portland-based patching compound.
- D. All saw cuts (control joints), cracks, indentations, and other non-moving joints in the concrete must be filled with a Portland-based patching compound.
- E. Expansion joints in the concrete are designed to allow for expansion and contraction of the concrete. If a floor covering is installed over an expansion joint, it more than likely will fail in that area. Expansion joint covers designed for resilient floor coverings should be used.
- F. Always allow patching materials to dry thoroughly and install according to the manufacturer's instructions. Excessive moisture in patching material may cause bonding problems or a bubbling reaction with adhesive.

HAZARDS

SILICA WARNING: Concrete, floor patching compounds, toppings, and leveling compounds can contain free crystalline silica. Respirable crystalline silica (particles 1–10 micrometers) can be produced by cutting, sawing, grinding, or drilling. Respirable silica is classified by OSHA as an IA carcinogen and is known to cause silicosis and other respiratory diseases. Avoid actions that cause dust to become airborne. Use local or general ventilation or protective equipment to reduce exposure below applicable exposure limits.

ASBESTOS WARNING: Resilient flooring, backing, lining felt, paint or asphaltic “cutback” adhesives can contain asbestos fibers. Avoid actions that cause dust to become airborne. Do not sand, dry sweep, dry scrape, drill, saw, beadblast or mechanically chip or pulverize. Regulations may require that the material be tested to determine asbestos content. Consult the documents titled *Recommended Work Practices for Removal of Existing Resilient Floor Coverings*, available from the Resilient Floor Covering Institute.

LEAD WARNING: Certain paints can contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state, and local laws and the publication *Lead Based Paint: Guidelines for Hazard Identification and Abatement in Public and Indian Housing*, available from the United States Department of Housing and Urban Development.

- G. Moisture must be measured using the RH Relative Humidity test method per the ASTM F2170 test standard. Moisture content should not exceed the allowable limit of the selected ECOsurfaces adhesive.

ES-90 – RH limit of 90% – normally selected
E-Grip 95 – RH limit of 95% – higher RH applications
E-Grip 99 – RH limit of 99% – highest RH applications

If RH levels exceed the selected adhesive’s RH limit, stop and correct situation.

- H. In the event that a moisture mitigation system is required, it must conform to the ASTM F3010 Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for use Under Resilient Floor Coverings.

For installations requiring adhesion to concrete, perform pH tests on all concrete floors per ASTM F3441 Testing Concrete pH for Resilient Flooring. If greater than the allowable limit of the selected Ecore adhesive, neutralize prior to installation.

- I. Adhesive bond tests should be conducted in several locations throughout the area. Glue down 3’ x 3’ test pieces of the flooring with the recommended adhesive and trowel. Allow to set for 72 hours before attempting to remove. A sufficient amount of force should be required to remove the flooring and, when removed, there should be adhesive residue on the subfloor and on the back of the test pieces.

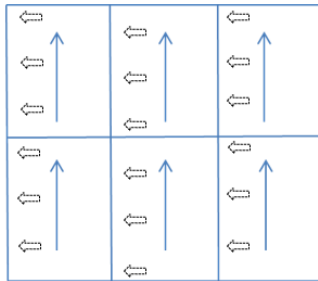
IV. MATERIAL STORAGE AND HANDLING

- A. Material should be delivered to the job site in its original, unopened packaging with all labels intact.
- B. Note: Shipping pallets, cradles, banding, etc. are not intended for storage. After 7 days, remove material from shipping pallets, cradles, etc. Rubber roll material should always be stored laying down; Storing rubber rolls on end will curl the edges resulting in permanent memory of the material. All edges with memory curl must be straight edge cut before installation.
- C. Material should only be stored inside and on a clean, dry, smooth surface. Rolls should be stored with the end of the roll on top, facing up. The end of the roll should not be positioned against an adjacent roll or surface, or welts may be created on that roll and the roll below.

- D. Roll material is stretched slightly during the manufacturing process. At the job site, the installer should unroll all rolls and allow to relax overnight. A bare minimum of two hours is required. Shaking the material once it is unrolled can help it to relax.
- E. **Inspect all materials for visual defects before beginning the installation. No labor claim will be honored on material installed with visual defects. Verify the material delivered is the correct style, color, and amount. Any discrepancies must be reported immediately before beginning installation.**
- F. The material and adhesive must be acclimated at room temperature for a minimum of 48 hours before starting installation.

V. INSTALLATION PREP

- A. Rolls must be unrolled and installed in the same direction (**Directional arrows are stamped on bottom of the rolls; see below.**) Rolls are labeled with batch numbers and roll numbers. Do not mix batch numbers together and install all rolls in consecutive order. Laying rolls in the opposite direction and out of sequence **can** cause color variations between the rolls.



- B. **NOTE: Ordering various custom roll lengths for a product eliminates the possibility of the rolls being manufactured and numbered in the customer's desired installation sequence, and Ecore cannot be responsible for resulting shading issues.**
- C. Roll material is stretched slightly when it is rolled at the factory. Unroll all rolls and allow to relax for a minimum of two hours before gluing or cutting material. Shaking the material once unrolled can help it to relax.
- D. Snap a chalk line where the first seam will be located. Straight cut the edge of the first piece if required. Align the first roll factory edge to the chalk line.
- E. Straight edge the second lineal drop if the first lineal drop is not long enough to span the entire length or width of the room. If end or head seams are necessary, they should be staggered on the floor and overlapped approximately 3-6".
- F. Position second row with no more than 1/8" overlap over the first roll at the seam (see below). After adhesive is applied to the substrate, the material will be worked back to eliminate the overlap. This procedure will leave tight seams and eliminate any gaps. Care should be taken to not over compress the seams. Over compressed seams will cause peaking.



- G. Repeat for each consecutive roll to be installed that day.

VI. INSTALLATION

- A. After all above procedures are performed, begin application of the adhesive. Apply ES-90 to the substrate using a 1/16" square notched trowel.
- B. Fold the first drop lengthwise (half the width of the roll).
- C. Spread adhesive, taking care not to spread more ES-90 than can be covered by flooring and rolled within 30 minutes. The open time of the adhesive is 30 - 40 minutes at 70°F and 50% relative humidity.
- D. NOTE: Temperature and humidity affect the open time of the adhesive. Temperatures above 70°F and/or relative humidity above 50% will cause the adhesive to set up more quickly. Temperatures below 70°F and/or relative humidity above 50% will cause the adhesive to set up more slowly. The installer should monitor the on-site conditions and adjust the open time accordingly.
- E. Fold over second half of first roll and first half of second roll. Spread adhesive. Spread adhesive at 90 degrees to seam to avoid excessive adhesive coming up at seam. Roll material.
- F. Carefully lay the material into the wet adhesive. DO NOT let the material drop because this will cause air to be trapped beneath the flooring.
- G. Immediately roll the floor with a 75–100 lb. roller to ensure proper adhesive transfer. Overlap each pass of the roller by 50% of the previous pass to ensure the floor is properly rolled. Roll the width first and then the length. Roll again within the first 60 minutes. It may be necessary to weigh down the seams until the adhesive develops a firm set.
- H. Continue the process for each consecutive drop. Work at a pace so that you are always folding material back into wet adhesive.
- I. **Do not allow ES-90 to cure on your hands or the flooring. Cured adhesive is very difficult to remove. We strongly suggest wearing gloves while using ES-90.**
- J. **Immediately wipe off excess adhesive with a rag slightly dampened with mineral spirits or denatured alcohol. Follow with a rag dampened with water.**
NOTE: Use mineral spirits/ denatured alcohol sparingly. Saturating the rubber may cause darkening and the adhesive to be pushed into the pores of the rubber.
- K. Hand roll all seams after the entire floor has been rolled. If some seams are gapping, hold them together temporarily with blue painter's tape. Do not use duct or masking tape or residue may remain on floor. **Remove tape after adhesive has developed a firm set (approximately 2-3 hours). ECOsurfaces will not be responsible for residue left behind from tape of any kind.**
- L. Keep foot traffic off the floor for a minimum of 24 hours. Floor should be kept free from rolling loads for a minimum of 48-72 hours. Foot traffic and rolling loads can cause permanent indentations or bond failure in the uncured adhesive.

Maintenance and Assigned Responsibilities

It is the Specifier's responsibility to:

- Mandate covering and protection of floor from damage and construction debris until construction is complete.
- Assign to the appropriate party responsibility for the initial cleaning of floor following published procedures.

ECOsolutions recommends our environmentally friendly line of maintenance products, including E-Cleaner.

It is the General Contractor's responsibility to provide:

- A building or installation area that is fully enclosed from the elements, e.g., finished roof, windows, doors, etc.
- Temperature that is climate controlled with a minimum uniform temperature of 65° F for 48 hours prior to, during, and after the flooring installation, for acclimation of flooring materials.
- Protection for those areas of the flooring that are subject to direct sunlight through doors or windows by having the doors or windows covered for such time until the installation of the material is complete.
- Protection for flooring from damage and construction debris by using an appropriate floor covering until such time that the recommended initial cleaning may be performed.

Cleaning Procedures – ECOfit & ECOfit Plus Coated with ECOguard

Steps	Green Products	Dilution	Tools / Pads
Initial Cleaning	E-Cleaner	10 oz / Gal Water	Soft Nylon Brush, 3M 4100 White or 4200 Beige pad or equiv., or Microfiber Mop
Daily/Weekly Clean	E-Cleaner	2-4 oz / Gal Water	Soft Nylon Brush, 3M 4100 White or 4200 Beige pad or equiv., or Microfiber Mop
Heavy Soil	E-Cleaner	10 oz / Gal Water	Soft Nylon Brush, 3M 4100 White or 4200 Beige pad or equiv., or Microfiber Mop
Restorative Stripping	E-Strip	16 oz/ Gal Water	3M 7200Black or 7100 Brown pad or equiv. DO NOT USE 3M 7300 HIGH PRODUCTIVITY PAD OR EQUIVALENT

1. Cleaning – ECOguard Coated ECOfit & ECOfit Plus
A. Initial Cleaning

Note: Adhesive should have 24 hours minimum to cure before cleaning the floor.

1. Remove all surface soil, debris, sand, and grit by sweeping or vacuuming.
2. Scrub with E-Cleaner and a low-speed scrubber or auto scrubber with a soft nylon brush or pads from table above. If soil is minimal, a microfiber mop may be used.
3. Wet vac, damp mop and allow floor to dry.

B. Optional E-Finish Floor Finish

1. Maintain temperature at 65° F for 72 hours before and after application.
2. Apply 2-3 thin coats with microfiber mop and let thoroughly dry between coats (1-2 hours).
3. Provide sufficient cure time of the final coat before allowing foot traffic (at least 3 hours).

Note: FLOORS TREATED WITH E-Finish - When cleaning floors finished with E-Finish, use only a Microfiber Mop, Soft Nylon Brush, or White or Beige pad.

C. Daily/Weekly Cleaning

1. Remove all surface soil, debris, sand, and grit by sweeping or vacuuming.
2. Scrub with E-Cleaner and a low-speed scrubber or auto scrubber with a soft nylon brush or pads from table above. For heavier scuff marks, consider using a nylon deck brush.
3. Wet vac, damp mop and allow floor to dry.

D. Heavy Soil Cleaning

1. Remove all surface soil, debris, sand, and grit by sweeping or vacuuming. **DO NOT USE 3M 7300 HIGH PRODUCTIVITY PAD OR EQUIVALENT**
2. Scrub with E-Cleaner and a low-speed scrubber or auto scrubber with a soft nylon brush or pads from table above. For heavier scuff marks, consider using a nylon deck brush.
3. Wet vac, damp mop and allow floor to dry.

Note: If area is too small for a buffer or auto scrubber, a nylon deck brush may be used to remove scuff marks or heavy soil. Brush should be approximately 22 gauge.

E. Stripping ECOguard

1. ECOguard is difficult to completely remove and may require several attempts with the approved stripping pad and E-Strip. Anything used to chemically remove the sealer will jeopardize the integrity of the rubber.
2. Use 16 to 32 oz. E-Strip / gallon cold water & low-speed buffer and black stripping pad.
3. Apply a liberal amount of diluted stripper to floor and allow to sit for 5-10 minutes. Work buffer from side to side until sealer is removed. This may require several attempts and effectiveness will be influenced by unevenness in the substrate.
4. **CAUTION – A standard black pad** should be the most aggressive pad used. **DO NOT USE high-performance black pads such as 3M's 7300 series or floor damage may result.** ECOsurfaces assumes no liability in the event of damage to the rubber in the removal process. ECOguard is considered a permanent sealer and not intended to be stripped from the rubber as a standard procedure.
5. To re-apply sealer, see E-Finish (above).

CAUTION – A “standard” black pad should be the most aggressive pad used and only for restorative maintenance purposes. **A High Productivity Black pad such as 3M's 7300 is not to be used; it will act as a sander and damage the rubber.** ECOsurfaces assumes no liability in the event of damage to the rubber in the removal process.

Note: If area is too small for a buffer or auto scrubber, a nylon deck brush may be used to remove scuff marks or heavy soil.

2. E-Finish

Description

E-Finish is an interior, matte finish, 1-component. acrylic sealer.

A. Tools / Materials Required

1. Safety glasses
2. Latex or rubber gloves
3. Paint roller tray (18")
4. Foam paint trim brush
5. MICROFIBER MOP and MICROFIBER applicator pads
6. E-Finish
7. Rags

B. Surface prep.

1. An improperly prepared surface can act as a bond breaker and result in a project failure. It is important to remove all dirt, grease, wax, oil, paint, or other contaminants before applying the E-Finish.

NOTE: E-Finish can be applied over the factory applied ECOguard finish after cleaning the ECOguard finish.

C. Application

1. Precautions

- a) Remove spills and drips immediately from other surfaces.
- b) Apply each coat to entire space in one step rather than in sections for best results. Work from one side of room to other with scrubbing motion and keep a wet edge.

- c) **Use MICROFIBER PAD AND MOP** to apply; use small foam paint brush for perimeter / cut in.

NOTE: Do not use string mops or other applicators to apply! The use of string mops or other applicators may result in a poor application and complete removal may be required.

2. Application of E-Finish

- a) Allow floor to COMPLETELY dry, which may be 12-24 hours after cleaning. Applying sealers onto an even slightly damp floor will result in a failed application.
- b) Maintain temperature at 65° F (18° C) or higher for 72 hours before and after installation.
- c) Shake bottle well before using.
- d) Apply one coat of E-Finish using a foam paint brush for perimeter or close application, and a **MICROFIBER PAD AND MOP** for the floor itself.
- e) Apply subsequent coats at a 90-degree angle to cover any missed areas.
- f) Apply THIN coats; several thin coats are more effective than one heavy coat.
- g) Allow each coat to dry thoroughly (1-2 hours) before applying next coat.
- h) Generally, 3 coats is the maximum applied.
- i) Use a **MICROFIBER PAD AND MOP**; we prefer the 3M Easy Scrub mop and Microfiber Cover with a wider paint tray to accommodate the applicator pad.

NOTE: Avoid streaks, puddles, and lap marks. Do not thin. Do not add water.

NOTE: Maintain adequate ventilation during coating and drying process.

- j) Recoat after 1-2 hours and floor is dry to walk on. Apply second coat at right angle to first.
- k) Clean up tools immediately with water.

D. Cleaning ECOsurfaces Rubber Coated with E-Finish

Steps	Products	Dilute	Tools
Initial Cleaning	E-Cleaner	10 oz. / Gal Water	Microfiber Mop, Soft Nylon Brush, or Red pad
Daily/Weekly Cleaning	E-Cleaner	2-4 oz. / Gal Water	Microfiber Mop, Soft Nylon Brush, or Red pad
Heavy Soil Cleaning	E-Cleaner	10 oz. / Gal Water	Microfiber Mop, Soft Nylon Brush, Red or Black pad DO NOT USE 3M 7300 HIGH PRODUCTIVITYY PAD OR EQUIVALENT

a) Initial Cleaning

- a) Remove all surface soil, debris, sand, and grit by sweeping or vacuuming.
- b) Scrub with E-Cleaner and scrubber, brush, or pads from table above.
- c) Wet vac, damp mop and allow floor to dry.

b) Daily/Weekly Cleaning

- a) Remove all surface soil, debris, sand, and grit by sweeping or vacuuming.
- b) Scrub with E-Cleaner and scrubber, brush, or pads from table above.
- c) Wet vac, damp mop and allow floor to dry.

c) Heavy Soil Cleaning

- a) Remove all surface soil, debris, sand, and grit by sweeping or vacuuming.
- b) Scrub floor with E-Cleaner with a soft nylon brush or pads from table above, following the dilution schedule above.
- c) Wet vac, damp mop floor and allow floor to dry.

E. Stripping ECOsurfaces Rubber Coated with E-Finish

- a) Use 16 oz. (1 pint.) E-Strip / gallon cold water & low-speed buffer & Black stripping pad
- b) Apply a liberal amount of diluted stripper to floor and allow to sit for 5-10 minutes. Work buffer from side to side until sealer is removed. This may require several attempts, and effectiveness will be influenced by unevenness in the substrate.
- c) **CAUTION – A standard black pad should be the most aggressive pad used. DO NOT USE high-performance black pads such as 3M’s 7300 series or floor damage may result. ECOsurfaces assumes no liability in the event of damage to the rubber in the removal process.**
- d) To re-apply E-Finish, please see “**Application**” above.

Warranty

All ECOsurfaces rubber flooring is guaranteed to be free from manufacturing defects on both material and workmanship. If such a defect is discovered, the customer must notify ECOsurfaces either through the contracting installer, distributor, or directly. If found to be defective under normal non-abusive conditions, at the discretion of ECOsurfaces, the sole remedy against the seller will be to repair, to replace, or to issue a credit not exceeding the selling price of the defective goods. These warranties only apply to the original purchaser.

Please see the ECOsurfaces Warranty Guide for length specifics.

ECOfit and ECOfit Plus warranty shall not cover dissatisfaction due to improper installation, damage from improper maintenance or usage, or general misuse, including and without limitation: burns, cuts, tears, scratches, scuffs, damage from rolling loads, damage from cleaning products not recommended by ECOsurfaces, slight shade variations or shade variations due to exposure to direct sunlight, or differences in color between samples or photographs and actual flooring.

Please see the ECOsurfaces Warranty Guide for length specifics.

Excluded from Warranty

These warranties do not apply to the following:

1. The exact matching of shade, color, or mottling.
2. Any express or implied promise made by any salesperson or representative.
3. Tears, burns, cuts, or damage due to improper installation, improper use, or improper cleaning agents or maintenance methods.
4. Wear from chairs or other furniture without proper floor protectors will void the warranty. Care should be taken to protect the flooring from damage by using good quality protective feet for chairs, tables, and other furniture. Chair mats may be required under chairs with casters/wheels.
5. Labor costs for installation of original or replacement material.

6. Sale of "Seconds," "Off Goods," or other irregular (non-first quality) flooring materials. With respect to "Seconds" or "Off Goods," such are sold "as is," and ECOsurfaces makes no warranties whatsoever, express or implied with respect thereto, including warranties of merchantability or fitness for a particular purpose.
7. Problems caused by moisture, hydrostatic pressure, or alkali in the sub-floor.
8. Problems caused by uses, maintenance, and installation that are contrary to ECOsurfaces specifications, recommendations or instructions.
9. Material installed with obvious defects.
10. Damage to flooring products from high heels or spike heels.
11. Damage to flooring products from rubber mats or rubber backed mats.
12. Installation of ECOsurfaces products with adhesives other than those recommended by ECOsurfaces.
13. Fading and/or discoloration resulting from heavy sunlight penetration and ultraviolet ray exposure from direct or glass-filtered sunlight.
14. Material that is not installed and maintained as recommended by ECOsurfaces.
15. Damage to flooring products from pallet jack and tow-motor traffic.
16. Environments where the product will be exposed to animal fats, vegetable oils, grease or petroleum-based materials. (i.e.: commercial kitchens or auto repair facilities.)
17. Premature wear and deterioration from spikes and skate blade exposure.
18. Differences in color between products and photography.
19. Embossing/density deviations between product and samples, photography.

These warranties are in lieu of any other warranty expressed or implied. ECOsurfaces shall not be liable for any incidental or consequential damages which may result from a defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. These warranties give you specific rights, and you may also have rights which may vary from state to state. To know what your legal rights are in your state, consult your local or state Consumer Affairs Office or your State Attorney General. Please visit www.ecosurfaces.com for the latest warranty information.



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