



Pool Installation Manual

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Introduction

Using This Installation Manual

The installation of ecoFINISH® coating material is successfully accomplished utilizing our U.S. Patented Installation process to ensure a beautiful, well adhered, and long-lasting finish. This manual will assist in understanding how to prepare a pool for ecoFINISH® coatings, coating material installation methods, techniques, as well as safety issues and concerns during application.

Reading and understanding the information included in this manual will assist in avoiding personal injury and damage to equipment and the pool finish. After reading through this manual, the installer should be able to train others as to the best and safest methods for applying ecoFINISH® coatings.

Sections in this manual are arranged to guide you through the process of applying ecoFINISH® Coatings. First, we introduce essential safety precautions. Read and understand this section before proceeding. The next section describes and instructs the installer on the proper process of installing ecoFINISH® Coatings, which includes preparing and setting up the equipment, preparing the pool, applying the initial flock coating, applying subsequent coats, and finishing the pool.

Pay close attention to all  **WARNINGS**,  **CAUTIONS**, and **PRO-TIPS** contained throughout this manual. They have been placed in the appropriate sections to make the installer aware of potential pitfalls, issues, and considerations during the preparation and installation of the finish.

Certain components of the ecoFINISH® system, such as air compressors, hose reels, and hoses have been manufactured by third parties and then integrated into this ecoFINISH® manual. While these manual lists general safety concerns and procedures for these components, it is vital that you also review the manuals provided by the manufacturer for each of these components to ensure that you fully understand the safety, use, and maintenance requirements of each component.

With proper installation methods, ecoFINISH® Coatings can be installed quickly and at a fraction of the cost of comparable pool finishes. We hope your installers and customers enjoy our products. Welcome to the worldwide family of ecoFINISH®!

General Considerations

This is intended as a reference manual for the use of ecoFINISH® trained Installers and Dealers only. The information contained in this manual is for supplementary information use only, and should not be considered a replacement for on-site training of the installer by ecoFINISH® corporate trainers.

The application of ecoFINISH® coating material finishes is a safe, repeatable process when the installer has completed training to gain a full understanding of the proper safety practices and equipment operation and follows all recommended procedures. **Any deviation from the advice contained in this manual may result in a poor-quality finish or even personal injury.**

Only use the ecoFINISH® coatings installation equipment and products for installing ecoFINISH® Coatings. Any deviant use of the equipment or substitution of products may not only result in personal injury, but may also result in the loss of warranty coverage, and ecoFINISH® Installer status.

This manual does not address federal, state, and local laws and codes regarding workplace safety and working with hazardous materials. Contact the appropriate authorities to ensure compliance.



This caution sign will appear periodically to alert you to important issues.



This warning sign will appear periodically to alert you to safety hazards.

Safety

Material Safety Data Sheets for all ecoFINISH® products may be obtained directly from ecoFINISH®. Requests can be made by calling 800-333-1443.

Epoxy Primer Safety



WARNING: Continual exposure to epoxy primer can result in occupational allergies. Do not come in to contact with or ingest epoxy primer. Never atomize and spray liquid epoxy primer.

Cured epoxy primer is made from mixing two parts, a resin, and a chemical hardener. The primary occupational health risk related to epoxy primer is an allergic reaction to the hardener, which can develop through prolonged exposure and result in occupational asthma. The risk of developing this allergy is greater if you have fair skin, are exposed to other sensitizing substances, have hay fever or other allergies, or if you are under a lot of stress.

Some symptoms associated with occupational asthma include:

- Coughing
- Wheezing
- Nasal irritation
- Difficulty in breathing
- Tightness of chest

The risk associated with epoxy primer is greatest when they are in liquid form; as the resin and hardener mix and cure, they form a non-toxic solid.

The most common form of exposure to epoxy primer is through skin contact during mixing. Even minor contact repeated over a long period of time can result in chronic health problems. Be sure to wear gloves when mixing the epoxy primer to avoid any splashes. Never allow the hardener to remain on your skin; it can cause severe chemical burns and may discolor or scar your skin. In case of skin contact, quickly flush the exposed area with water.

Epoxy primer can also be ingested if it contaminates food, beverages, or eating surfaces. Always wash your hands before handling any food and never place your food on a surface in close proximity to where the resin and hardener were mixed. If more than a trace amount is ingested, contact a physician or poison control immediately. Do not induce vomiting unless instructed by medical personnel.

Finally, breathing highly concentrated epoxy primer vapor can cause respiratory problems. At room temperature, epoxy primer is rarely in concentrated vapor form, but during the application process, it is heated to extreme temperatures, which can cause a high concentration of fumes in the pool. Always wear protective eyewear, an OSHA approved respirator, and gloves whenever using the installation torches. Epoxy primers should never be atomized and sprayed onto the surface, as this would create a dangerous breathing health hazard.

Indoor Installation Safety

When preparing to install an ecoFINISH® product on an indoor pool, additional safety precautions that must be taken to reduce the risk of injury to both the installer and the customer. Be sure that all internal vents and ductwork are deactivated and sealed to localize ventilation so that fumes do not escape the work area and spread into other parts of the building. Open nearby windows and set a ventilation system as needed to properly ventilate the work area. Temporarily deactivate fire alarms and emergency sprinkler systems in the immediate work area as these may be triggered by fumes and heat rising off the pool during the installation process. The fire watch must be notified when deactivating the fire alarms and an additional fire extinguisher system must be kept within reach. Even with proper, localized ventilation, the accumulation of fumes and dust will likely be greater than when installing outdoors. This makes wearing proper respiratory safety equipment all the more essential to prevent serious injury.

Working indoors can also increase the risk of hearing damage due to dangerously high noise levels. Always wear appropriate hearing protection when installing ecoFINISH® coatings indoors.

See appendix A – Indoor Installation Checklist for additional considerations and information.



WARNING: PROPER VENTILATION IS MANDATORY

Propane Safety



WARNING: Propane is highly combustible; keep away all flames. Propane fumes can cause drowsiness or unconsciousness. Contact with liquid propane can cause frostbite.

Propane is extremely flammable. It will ignite from open flames, sparks, static electricity, and cigarettes. Therefore, keep any item that can produce these effects away from the tank, the gas line, and the applicator gun. In case of fire, first shut off the gas supply from the tank. If this is not possible and there is no risk to the surroundings, then let the fire burn itself out. In other cases, extinguish with a fire extinguisher. Store the tank in an area with adequate ventilation under temperatures no higher than 125 °F (52 °C). Close valve when not in use, and always use a backflow prevention device in any piping. Install a cap when transporting the cylinder, and always keep it separate from any oxygen tanks.

Propane mixed with air is explosive. Using the applicator gun in a closed area with poor ventilation is very dangerous, as even trace vapor can become condensed over time and, therefore, highly volatile. Make sure there is plenty of ventilation on the job site. Also, make sure any electric equipment is adequately shielded to prevent sparks. Prevent a build-up of electrostatic charges by grounding all electronics. Finally, use non-sparking hand tools. In case of an explosion, alert the fire department and call for medical aid if needed. Evacuate all personnel from the danger zone, and immediately cool cylinders with water spray from a safe distance to prevent it from exploding.

Inhalation of the gas can cause drowsiness or unconsciousness. Contact with cold gas or liquid propane should be avoided because both can cause frostbite. Propane fumes displace oxygen in the air and can cause a serious risk of suffocation. Always operate the machinery outdoors or in a well-ventilated room. If you feel dizzy or tired while operating or working around the propane, get fresh air and rest. Under severe situations, artificial respiration and medical assistance may be required.

Contact with the propane can also be very dangerous. Rapid evaporation of the liquid may cause frostbite, which can have serious effects on the central nervous system. Always use cold-insulating gloves when handling the canister. In the case of frostbite, rinse with plenty of water, and do not remove clothes. Immediately seek medical attention.

Propane gas is heavier than air. If there is any leak in the fuel line, the gas will leak out and collect at the bottom of the pool. This can create the potential to ignite as the installer torches the pool floor or at the base of the pool walls. Therefore, before every use, the fuel lines from the tank to the applicator gun, as well as the tank itself, should be checked for leaks using a leak detection agent. In case of a leak, evacuate all personnel and keep them upwind. Shut off all ignition sources, ventilate the area, or move the cylinder to a well-ventilated area.



Installation Equipment Torch Safety



WARNING: Keep flame a safe distance from yourself and all individuals. Keep away from the propane source. Periodically check propane hoses for leaks.

Great care must be taken when handling the ecoFINISH® coatings applicator gun. Because this equipment is directly connected to the propane lines, all precautions and safety measures discussed in the propane section above are also applicable when operating the equipment.

PROTIP: When using the applicator gun, it is imperative that the installer knows where the emergency shut off valve is located. It is advised to have a second person from the crew as a visual back up.

When lighting the torches, point them away from your body and keep them a safe distance away from your face. Do not look down the barrels of a torch when lighting it. Use a striker to start the flame. Do not use a lighter. When the torch is not ignited, the gas control dial must always be closed completely off. (See the Equipment Owner's Manual for further details)

The flame emitted from the ecoFINISH® Coatings applicator gun can be up to several feet long. The end of the flame is often transparent, yet still very hot. When moving through the pool, great care should be taken to point the applicator gun away from yourself and all people in the vicinity.

The flame can easily ignite and burn clothing or hair. Avoid wearing baggy, loose-fitting clothing. If possible, wear flame-retardant or flame-resistant clothing. When spraying the floor of the pool, be sure to keep the flame and heat from the flame as far away from your feet as possible. Make sure long hair is tied back. Also watch out for plants and leaves around the perimeter of the pool as they will easily catch fire if they come in contact with the flame. Always have a fire extinguisher at the ready so you can extinguish any fires quickly. Have a first aid kit that includes burn cream and/or aloe on hand at all times. In case of serious burning, seek medical assistance immediately.

Provide adequate ventilation to prevent the accumulation of flammable vapors. However, fans should also be kept a safe distance from the job site to prevent any sparking from the motors igniting any combustible vapors.

Preparing the Surface

Applying ecoFINISH® coatings material to the pool surface is typically a two to three-day process depending on the size of the pool surface area. Before coating material installation can begin, the pool must be emptied, etched or profiled, cleaned with a pressure washer, and all necessary surface repairs completed. All fixtures must be covered or removed to avoid contact with the epoxy primer and the extreme heat of the application equipment. Where applicable, the hydrostatic plug at the bottom of the drain should be removed to stabilize groundwater pressure (If a plug is not available, it may be necessary to install one). It may also be necessary to install one or more pump well points around the pool if the groundwater is too high above the bottom of the pool floor. The epoxy primer can then be applied and the surface hot flocked and finish coated, with ecoFINISH® coatings material.

Installing ecoFINISH® Coatings Indoors

- When preparing to install an ecoFINISH® product on an indoor pool, there are several additional steps that must be completed to ensure the safety of the installer and reduce the risk of damage to the pool.
- Be sure that all internal vents and ductwork are deactivated and sealed to localize ventilation so that fumes do not escape the work area and spread into other parts of the building.
- Tape off any internal windows and doors leading to other parts of the building using plastic sheets and tape to seal any air gaps.
- Open nearby windows and set up a ventilation system as needed to properly ventilate the work area.
- Request the appropriate authorized personnel to deactivate fire alarms and emergency sprinkler systems in the immediate work area. They may be triggered by fumes and heat rising off the pool during the installation process.
- Take care not to activate the fire alarm system when using the application gun
- Working indoors can also increase the risk of hearing damage due to dangerously high noise levels. Always wear appropriate hearing protection when installing ecoFINISH® coatings indoors.
- Even with proper, localized ventilation, the accumulation of fumes and dust will likely be greater than when installing outdoors. This makes wearing proper respiratory safety equipment all the more essential to prevent injury.
- Have a fire extinguisher or fire blanket on site at all times.



WARNING: It may be necessary to contract with an outside company to provide equipment capable of creating the proper ventilation for the workspace.

Preparing a Concrete Pool Surface Including 50/50 Epoxy Primer Application

1. If the pool surface is painted, it must be sand blast or media blast surface to remove all paint and loose material, and expose a clean cementitious surface. Blow or vacuum the resulting dust from the surface.
2. It is essential to understand that an application of ecoFINISH® Pool Finish **WILL NOT FIX BAD PLASTER, SUBSTRATE, or RENDERING.** Do not install if the original plaster, quartz, or cement finish is crumbling, or has considerable delaminating areas or hollow areas. To test the integrity of the original surface, use a “weed burner” type torch to apply heat to the entire surface of the existing pool finish. This will indicate how well the existing finish will respond to extreme heat. If there are pockets of moisture trapped in the cementitious surface, the application of heat may cause them to burst and pop the surface. If this is the case, these hollow spots will have to be patched and smoothed to match the surrounding area, and/or smoothed by diamond polishing pad or grinder before the installation can continue.

PROTIP: If it is determined that the original surface is not suitable for an ecoFINISH® installation



STOP! DO NOT CONTINUE WITH INSTALLATION IF THE UNDERLYING SURFACE CANNOT BE GUARANTEED TO PROVIDE A SUITABLE SURFACE TO BOND THE ecoFINISH® COATING MATERIAL.

3. Any cracks wider than 1/16” (2mm) should be repaired and sanded for best results. All repaired areas must be sanded smooth to prevent the surface variations from showing through the finish. Structural cracks must be stabilized and repaired utilizing accepted industry practices and materials. Visibly rusted rebar must be ground out and removed, and the remaining steel coated with anti-rust paint. Patch the repair zone with similar material to a finish matching the surrounding area.



SOME PATCHING MATERIALS MAY NOT REACT WITH THE ACID EQUALLY REACTIVE TO THE SURROUNDING AREA. PATCHES MUST BE SANDED TO BECOME FLUSH WITH THE SUBSTRATE.

4. Acid etch the surface using full strength (undiluted) Muriatic Acid applied with a plastic water pour can with a rain nozzle. Using plastic long handle brushes, brush the area that has active acid applied. Allow the acid to work the surface for a short period of time and then rinse the area with a garden hose to remove the acid to allow for inspection of the surface and determine the effectiveness. Multiple applications of the Muriatic Acid may be required to achieve the required surface roughness. This process is necessary to remove contaminants such as loose surface material, scale, calcium build-up or “cream” from a new plaster finish, but most importantly, to etch the surface for better epoxy primer adhesion. A surface texture similar to 60-80 grit sand paper is required.


FAILURE TO ACHIEVE THE MANDATORY SURFACE ROUGHNESS WILL RESULT IN LIMITED BONDING ADHESION, AND MAY RESULT IN SUBSEQUENT DELAMINATION FAILURE OF THE FINISH.

Products such as BIO-DEX Plaster White ‘n Brite may assist with acid etching for vertical walls.

5. Power pressure wash the finish to remove pool chemicals, dirt, oil, and other any other surface contamination as well as any residual acid. Use a pressure washer with a minimum pressure capacity of 3,000 psi and a low 25° (degree) angle nozzle or turbo nozzle.

Power pressure washing every square inch of the surface is equally as important as adequate acid etching. ANY MISSED OR INCOMPLETE AREAS WILL ALLOW ACID RESIDUAL AND LOOSE MATERIAL TO REMAIN ON THE SURFACE, AND WILL RESULT IN POOR ADHESION OF THE EPOXY PRIMER.

While it is not mandatory, ecoFINISH® recommends adding tri sodium phosphate (TSP) or sodium bicarbonate to neutralize the acidic water prior to pumping it out.

6. Dry all surfaces with weed burner heat torches. This process step also provides for the final test for the surface to find any areas that will delaminate and pop from the applicator gun heat. Finding them now allows for their repair prior to the installation of aquaBRIGHT™ or polyFIBRO®.
7. Mask all required tile lines, tile and rock features, light cord, and all fittings per the instructions contained in the appropriate sections of this guide.
8.  **Due to the epoxy primer repackaging requirements, the standard Part A has now been divided into two smaller packs. The new ratio for the epoxy primer is (2) Part A's per (1) Part B:**



X40 Primer



Cold Weather X40C Primer

Mix both parts of the X40 (or X40C) Part A with the Part B epoxy primer components in a mixing bucket for one minute (60 seconds) then add one (1) US gallon of Acetone in a mixing bucket using a squirrel type mixer for a minimum of 1 minute (60 seconds) to ensure the complete combination of all ingredients. Using 3/4" nap paint rollers, and dipping directly from the mixing bucket, roll out the 50/50 Remove this image and insert the landing Pad and wide pass Images that Ash made, which will be attached in the email epoxy primer to completely saturate the surface. Continue rolling in that area until the surface rejects any additional epoxy primer. When complete, the 50/50 application should have a wet surface appearance with no visual dry patches. Following the completed application, observe the surface to see if any dry areas appear. From the side of the pool, use a long-extended hand roller to reapply 50/50 to any dry areas. The 50/50 surface should exhibit a uniformly shiny appearance when complete. When cured, the surface should have a glossy amber appearance over the entire surface.



THE MIXER MUST BE KEPT ON A SLOW SPEED TO AVOID INTRODUCING AIR INTO THE EPOXY PRIMER MIXTURE.

9. Depending on the porosity of the surface, a second layer of 75/25 epoxy primer application (75% epoxy primer/ 25% acetone) may be applied if desired to assist with filling in surface porosity. This can be applied as soon as the 50/50 application is cured enough for foot traffic, or sooner using spike shoes.
10. Allow the 50/50 (and 75/25 if applied) to cure. The elapsed time from the application of 50/50 to the beginning of 100% epoxy primer should not exceed 12-14 hours under normal circumstances. The 50/50 must have cured enough to perform its intended purpose of providing strong adhesion to the surface and to eliminate the possibility of concrete outgassing during flock coat installation. Ideally, the 50/50 will be slightly tacky in a solid state the morning after application prior to the start of the 100% epoxy primer application.

The cementitious structure is now ready for the application of the red dye, 100% X40 epoxy primer, and the aquaBRIGHT™ / polyFIBRO® installation flock coat. The epoxy primer has a cure time of approximately 24 hours. After 24 hours you must prepare the epoxy primer surface by lightly sanding, wipe down with Acetone, and reapply 50/50. Allow the surface to air dry. Do not use the torch to dry.

Preparing a Fiberglass Pool/Spa Surface

ecoFINISH® coatings can also be applied to most fiberglass pools and spas. Use the following procedure to prepare the surface of a fiberglass structure to be coated with ecoFINISH® material.

1. After emptying the pool inspect the surface for substantial minerals build up. Look for discoloration (fading of the surface below water level), pick a spot near the pool drains and scratch the surface to determine if mineral build-up is present. **In case of mineral build-up to prepare, the surface sandblasting is the only option available.**



Check the fiberglass shell for calcium buildup. All calcium build up MUST be removed before the application of any ecoFINISH® coating for proper adhesion.

2. Remove all adhering contaminants and profile the surface by grit media blasting, or by sanding the surface with 36-40 grit sandpaper. Blow off or vacuum dust from the surface. When using the weed burner torch, apply heat to the entire pool surface to ensure the substrate is free of any blisters, hollow spots, osmosis, etc. This process step also provides for the final test for the surface to find any areas that will delaminate and pop from the applicator gun heat. Finding them now allows for their repair prior to the installation of aquaBRIGHT™ or polyFIBRO®.

PROTIP: Regardless of the profiling/cleaning method, the resulting surface must exhibit a profile or sanding cross-hatch that is easily felt with the hand. Sufficient surface roughness is mandatory for the epoxy primer to mechanically bond to the surface.

3. All Osmotic blisters and/or cobalt spotted areas must be removed by spot grinding, filled with an industry accepted filler material, and sanded smooth to match the surrounding area. Treatment of these surface imperfections by any other method may result in reoccurrence under or through the aquaBRIGHT™ finish.
4. Using a Shop-vac, vacuum all loose debris.

5. Wipe down the entire surface using very wet Acetone solvent rags. Replace used rags often to provide complete removal of dust and contaminants.
6. Mask all required tile lines, tile and rock features, light cord, and all fittings per the instructions contained in the appropriate sections of this guide. All plastic cover plates must be heavily masked to prevent discoloration from exposure to the high-temperature process heat.

PROTIP: If the pool is equipped with a soft plastic beauty strip between the pool top edge and the deck, it must be removed or masked prior to coating. Typically, these plastic strips are made of a low melt polymer that will not endure high-temperature process heat during installation.

7. Apply red dyed 100% X40 (or X40C) Epoxy Primer to the Fiberglass pool surface.

The fiberglass structure is now ready for the flock coat installation.



WARNING: ACETONE HAS A VERY LOW FLASH POINT. DO NOT INTRODUCE FLAMES OR ELECTRICAL SPARKS UNTIL THIS SOLVENT HAS COMPLETELY FLASHED OFF.

Protecting The Tile

To protect the tile and coping edge, mask with a combination of ecoFINISH® glass-coated silicone tape and ecoFINISH® silicone fabric. Masking of the tile and coping is required to prevent incidental or overspray coating with epoxy primer or hot coating material. Removing the coating material from tile and other unintended surfaces is time-consuming and can cause damage to the surfaces.



WARNING: It is possible to heat the glue on the back of the tape to the point it may catch fire. It will burn itself out quickly, but make sure there is nothing flammable nearby which could catch fire as well. Always keep a fire extinguisher at the ready. Make sure the tape and fabric are completely secured with no visible air pockets.

Tile Coating Preparation

If desired, glazed ceramic tiles may be coated with ecoFINISH® coating material. The tile must be prepared using the following procedures to create a bondable surface on the tile.

1. The tile glaze must be etched by grit media blasting, or by grinding, to remove the hard glaze, and create a rough surface to which the epoxy primer will bond.
2. Inspect the tiles for proper adhesion. If the tiles are loose, they must be re-adhered and grouted prior to epoxy primer installation. Any cracks wider than 1/16" (2mm) or missing grout, should be repaired for best results. All repaired spots must be sanded smooth to prevent visual variations in surface texture from showing through the finish.
3. Power wash the finish to remove pool chemicals, dirt, oil, and other any other surface contamination as well as any residual acid.

4. Allow the surface to dry completely. Heat from torches may assist in expediting the drying phase (if desired).
5. Apply 50/50 combination of thermal epoxy primers (X40) (or X40C) and Acetone solvent to completely saturate the prepared surface.
6. Apply red dyed 100% X40 (or X40C) to the tile pool surface.

The tile surface is now ready for the flock coat.

Patching

Any significant defects in the pool shell must be patched and blended before the epoxy primer is applied to allow an even surface for the material to bond to. Structural cracks and defects must be repaired using industry accepted processes and materials.

It is essential to repair the defect with a material and finishing technique similar to the surrounding surface of the pool shell. If the patch appears different prior to ecoFINISH® coating material installation in texture smoothness or finish method, the repair zone may be apparent after installation of aquaBRIGHT™ and polyFIBRO®.

If the patched area is raised (proud) above the surrounding surface, it must be ground or sanded down until it is flush to the surface. Otherwise, the ecoFINISH® coating may accentuate this, making it more noticeable.



When patching, the technician should make an attempt to match the texture of the patch with the texture of the existing finish as closely as possible. If the existing finish is a broomed finish then the patch should also have a broomed finish. If the existing finish is smooth, then the patch should also be finished smoothly to match.

Coating Fittings

Pool fittings (floor returns niches, wall returns, drain pots, etc.) are typically made from PVCs. The X40 epoxy primer will not adhere to these fittings. It is important to ensure during the epoxy primer phases not to coat these fittings with the X40 epoxy primer. Any plastic flanges or other areas intended to receive

ecoFINISH® coatings should be roughened by hand sanding with 36-40 grit sandpaper and cleaned with acetone. If X-40 epoxy primer is accidentally applied to the plastic, it should be immediately wiped clean with acetone.

The PVC fitting will tend to burn during the ecoFINISH® coatings application, so it is also important to lower the heat and slow the powder feed when you install around these fittings. This is accomplished by increasing the gun-to-surface distance to reduce the amount of heat affecting the plastic fitting, while using quick motions apply some powder coating material to the fitting surface, then quickly removing the heat. Allow the fitting to cool and apply a second coating of material in the same manner. Two coats of material are usually sufficient to “insulate” the fitting from being scorched, and the fitting can now be coated in the normal manner along with the surrounding area of pool surface to form a uniform appearance.

Because PVCs are difficult on which to install, for aesthetic purposes we do not recommend attempting to coat items like beauty fittings, wall/floor return heads, light rings and/or escutcheons.



WARNING: Never alter manufacture’s drain covers, including coating with ecoFINISH® coating material. It is recommended anytime a pool is drained to install new drain cover(s) that complies with the latest national and regional drain cover safety codes. All inlet and outlet fittings must be protected internally

Applying ecoFINISH® Coating Material

The patented ecoFINISH® method for applying an initial coat of ecoFINISH® coating material is known as the “hot flocking” method. This initial process is accomplished by installing melting particles of powder coating material into the curing 100% epoxy primer layer. The first particles of powder that strike the epoxy primer surface become surrounded and embedded into the epoxy primer layer forming a strong mechanical bond between the two materials. The coating system formed of 100% epoxy primer and the melted coating material is now extremely well bonded with the 50/50 epoxy primer saturated the original cementitious surface, locking the ecoFINISH® coating material finish onto the pool surface.

Approximately 80% to 90% of the total visual coverage is applied during the hot flock layer installation. The “Hot Flock” technique is REQUIRED to ensure the “slippery” ecoFINISH® coating material particles are mechanically bonded to the epoxy primer. The installer must periodically check the 100% epoxy primer surface to ensure it remains “tacky” during the application of the flock coat. If the epoxy primer cures during the installation and becomes hard-set, STOP and reapply 100% to the remaining areas to be flocked before proceeding.



APPLYING THIS FIRST COATING OF MATERIAL ONTO EPOXY PRIMER THAT HAS HARDCURED WILL GUARANTEE A DELAMINATION FAILURE WILL OCCUR.

The epoxy primer has a cure time of approximately 24 hours. After 24 hours, you must prepare the epoxy primer surface by sanding, wipe down with Acetone, and reapply 100%. Do not use the torch to dry. Allow surface to air dry.

When installing in large pools, or over large surface areas, apply the 100% epoxy primer to manageable sized areas where the installer can be certain to be able to flock coat while the epoxy primer remains tacky. Application of the coating material into sections is accomplished by leaving a 6” - 8” band of epoxy primer un-flocked at the edges (margins) of the section. The adjacent section to be flocked next is then coated with 100% epoxy primer and overlapped onto this un-flocked band of 100% epoxy primer to tie the two sections together. (If the process extend to multiple days, always sand and wipe down with acetone the un-flocked band of 100% epoxy primer). When this next section has reached the tacky stage, it may then be flock coated. Follow this progression until the entire surface has been flock coated.

Mixing and Application of 100% X40 Epoxy Primer

The X40 or X40C is a two-component, solvent free epoxy primer resin, which has been specially designed for use with concrete and other types of surfaces. When installed per this manual, X40 or X40C will provide an ideal surface for ecoFINISH® Coatings products to bond.

Mix both parts of the Part A with the Part B ecoFINISH® X40 (or X40C) epoxy primer components in a clean bucket using a squirrel type mixer. MIX THOROUGHLY AND COMPLETELY FOR ONE MINUTE BUT NO MORE THAN TWO. The mixer must be kept on a slow speed to avoid introducing air into the epoxy primer mixture.



Due to the epoxy primer repackaging requirements, the standard Part A has now been divided into two smaller packs. The new ratio for the epoxy primer is (2) Part A's per (1) Part B.

PROTIP: When mixing the first batch of 100% epoxy primer, pour approximately 1 qt. of thoroughly mixed, un-tinted epoxy primer into a small clean container PRIOR TO MIXING IN THE RED TINT DYE POWDER. This un-tinted epoxy primer is to be used for cutting in the tape line to prevent red dye from staining the tile grout lines or coping.

Now add the red tint pigment and finish mixing this first batch epoxy primer and mix all subsequent 100% mixes with red pigment powder to tint the epoxy primer, which will visually ensure complete coverage while rolling over the amber-colored 50/50 epoxy primer layer. Pour the red dyed epoxy primer into 3-4 paint roller trays with disposable liners. Using multiple trays to spread out the epoxy primer mix will extend the workable pot-life of the mix. Never leave mixed 100% epoxy primer in the mixing bucket, as it will superheat from the curing reaction, severely shortening the workable pot life of the material.

Be certain to use new tray liners each time you mix a new batch of epoxy primer. If you mix old and new batches together, the old batch of epoxy primer—which has already started hardening—will make the new batch cure at an accelerated rate, reducing usable pot life of the epoxy primer.

As previously discussed in the preparation section of this manual, the surface preparation requires at least one coat of the epoxy primer to be thinned by 50% using an Acetone solvent and applied to saturate the surface. This creates a low-viscosity liquid epoxy primer that will saturate into the surface pores creating a deeper bond, and which will seal the surface porosity to eliminate outgassing pinholes in the ecoFINISH® coating material finish. Depending on the porosity and surface roughness of the substrate, a second 50/50 or a 75/25 (X40 Primer /Acetone) coat may be required.

The method of the tinted 100% epoxy primer application is different than the 50/50 layer. The 50/50 was applied using 3/4" nap rollers, dipping directly from the mixing bucket, and applied to saturate the surface to the point of rejection completely. 100% epoxy primer for flock coating is applied as a thin layer using 1/4" nap rollers, loaded onto the rollers from lined paint trays. Saturate the rollers with epoxy primer in the tray well, then roll out the roller on the tray smoothing deck to remove the excess and evenly distribute the remaining loaded epoxy primer into the roller. Now roll the epoxy primer onto the 50/50 coated surface using great care to ensure all areas receive a thorough and complete layer of tinted 100%, while also taking care to roll out the section to an evenly applied, thin layer. Remove any runs with a depleted roller or brush. Epoxy Primer runs and streaks that are allowed to harden will be apparent under the ecoFINISH® coating.

Never roll out more 100% epoxy primer than the installer can be certain to be able to flock coat while it remains tacky.

On warm days, the 100% epoxy primer will be ready to begin the flock coat application in approximately 45 – 90 minutes in ideal weather conditions. Wearing gloves, periodically check the 100% epoxy primer's cure by touching and slowly removing a finger to observe the results. If the epoxy primer coats to the finger as a liquid, it will require additional cure time. When the epoxy primer forms tiny "spider webs" as the finger is slowly drawn away from the surface, it is ready to begin the flock coat process.

PROTIP: To ensure proper epoxy primer blending ratios, NEVER MIX PARTIAL EPOXY BATCHES from full size kit bottles. For small batch requirements, order and mix small batch kits from the “Rapid Set Epoxy Primer X40C Minis” packaging. Mixing partial batches from full size epoxy primer kits can result in mixing incorrect ratios of resin and hardener, resulting in a compromised epoxy primer cure.

Tip: On extremely hot days it is best to distribute the mixed epoxy primer into multiple paint trays.



You must have the equipment operational prior to rolling out the epoxy primer.

Hot Flocking Technique – First Coating Material Layer Application

The Patented ecoFINISH® installation process requires the use of the ecoFINISH® “hot flocking” method to ensure a strong bond of the ecoFINISH® coating material to the epoxy primer bonding agent.

Flame spray installation of the ecoFINISH® coating material into the still soft and curing epoxy primer (hot flocking) mechanically bonds the material as it blends with the epoxy primer, creating an insulated barrier against the pool shell heat sink, allowing further coating material to flow out smoothly. Approximately 80% - 90% of the total visual coverage of the ecoFINISH® coating material is applied during the flock coat application.

The ecoFINISH® process utilizes portable flame spray powder coating to heat the fine particles of ecoFINISH® coating material as they pass through the flame and are transferred to the surface. As the application continues, the particles are exposed to sufficient process heat in excess of their melt temperature, causing them to flow out and form a cohesive polymeric film layer completely. Failure to fully melt the particles into a smooth complete layer will result in particles partially adhered to the other surrounding particles but without the formation of the required film barrier. This will allow water to pass through the partially melted particles to the underlying surface, which over time can potentially degrade the surface and cause subsequent delamination failure of the ecoFINISH® coating material.

Beginning with the initial flock coat, the material should be fully processed during application to completely melt the particles into a smooth, continuous film of the polymeric coating. When each layer is properly applied to this extent, each of the subsequent material application coats will be much easier to flow out into smooth layers, and the installer will have melted all individual coating layers into one single thicker layer as required. Leaving the first coating rough will cause considerable additional work by the installer to achieve proper flow out and creation of a complete film of ecoFINISH® material.

In addition to the required process heat, creating a complete polymeric film layer requires sufficient material to be applied with which to form the layer. **As the applicator gun is traversed side to side for each pass, the spray pattern must be overlapped to provide even deposition of the powder coating material.** Whether using the ecoFINISH® Standard applicator gun with an approximate 3’-3 ½” round spray pattern or the ecoFINISH® Vortex Pro applicator gun with an 8”- 9” flat fan spray pattern, a 50% overlap must be used on each subsequent traverse pass for even, non-striped, deposition of material.

When installing coating material onto the walls, move the applicator gun in a side to side motion with the applicator gun tip about 3 feet from the surface, starting from at the top tile line to the cove and working

up to the tile. As the process heat rises up the wall, it will preheat the epoxy primer above, allowing the ecoFINISH® coating material to melt and flow out more efficiently.

PROTIP: ENSURE EPOXY PRIMER REMAINS “TACKY” THROUGHOUT THE “HOT FLOCK” INSTALLATION. DO NOT INSTALL ONTO HARD SET, FULLY CURED EPOXY PRIMER. BOND FAILURE WILL OCCUR.

When installing onto the floor, use the same applicator gun motion and applicator gun-to-surface distance, while holding the applicator gun at no less than a 45-degree angle toward the floor, and slowing backing away with small steps as each pass is applied. This will cause the process heat from the current passes to travel over the just coated and still processing coating material to assist with complete melting and flow out of the particles.

PROTIP: To eliminate visual striping, never shoot directly down at the floor or too far out from your body. Always shoot at approximately a 45-degree angle.

Limit each pass width to approximately 36” – 42” inches as the applicator gun is moved in a side to side motion. This will allow the installer to ensure the applicator gun is held at the appropriate angle to the surface at all times. Do not angle the applicator gun away in a flaring motion at the end of each pass, as this will send warmed particles away from the current installation zone, and adhere them to the adjacent surface without sufficient heat to flow them out. This adhered overspray will cause the surface to be very rough, and require additional work by the installer to achieve the required smooth surface.



INCORRECT ANGLES



CORRECT ANGLES

When the epoxy primer has sufficiently cured, begin the flock coat by kneeling on the pool deck edge at the shallow end of the pool, and reach down into the pool to apply the coating material to create a “landing pad” approximately four (4) feet square (1 square meter). Shut off the applicator gun and allow the landing pad to cool for about three minutes. From the side of the pool above the landing pad, and without walking on or touching the surrounding epoxied surfaces, enter the pool and stand on the landing pad. Relight the applicator gun, and begin coating the floor by reaching outward and installing coating material passes while working back toward the landing pad. Continue flocking the floor in sections down the length of the pool, walking on previously installed, cooled sections to reach and flock additional sections.



DO NOT WALK ON THE EPOXY PRIMER. ONLY WALK AND STAND ON THE FLOCK COAT.

When the initial pass reaches the other end of the pool, the installer can now coat one continuous pass adjacent to the first pass, working back to the shallow end while walking on the previously installed, cooled flock coat. When complete, the flock coated floor will allow the installer to move around the pool to flock the walls in sections of 36" to 42" in width until the entire surface has been completely flock coated.

Allow the flock coat layer to cool to ambient temperature before proceeding with the second coating layer application.

Prior to beginning each subsequent coating layer, the installer must walk the pool to inspect for any positive blemish bumps that must be removed. Using a 4" razor blade scraper, carefully cut and scrape any blemishes flush with the surrounding areas. Use care not to cut through the coating and/ or epoxy primer. When finished, sweep the entire pool and vacuum any over-sprayed material and other debris to clean prior to the next coating layer application.

PROTIP: Care must be taken so that the 100% remains tacky. The sunny side of the pool should be hot flocked first as the heat from the sun will cause the 100% to set faster.

Only use a medium stiffness nylon bristle brush to sweep the finish. Using a dustpan and brush, or shop vacuum, remove and discard the loose overspray powder. (DO NOT ATTEMPT TO REUSE THIS COLLECTED MATERIAL).

Figures 1 and 2, show the progression of passes to flock coat the floor.

Figure 1: Install the flock coat on the floor in approximately 36-42" wide passes beginning from the "landing pad" as illustrated in Figure 1. Steps will be done after the floor is completed, take extra caution cutting tight corners.

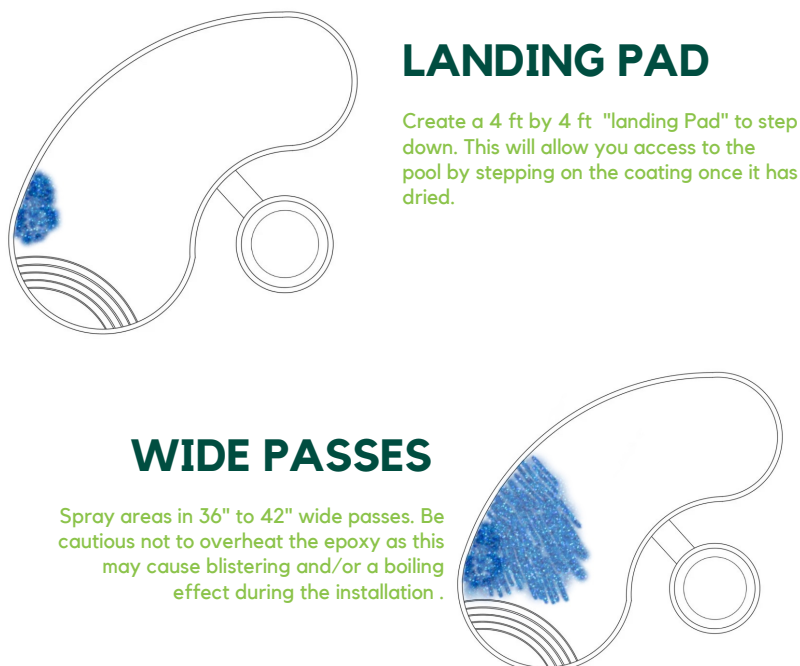


Figure 2: Continue working in 36-42” wide passes down the length of the pool to completely flock coat the floor.



The installer must maintain a 45-degree angle when using the applicator gun.



Holding the applicator gun too close to the substrate and/or spraying with too high of a powder feed rate setting can cause ridges in the coating, which will look like the finish is visually striped. If left unchanged and in large areas, this condition is correctable but will require great amounts of labor time and material.



Be cautious not to overheat the epoxy primer as this may cause blistering and/or a boiling effect during the installation process. Take special care during the “Hot Flock Coat” application to avoid this issue.

Second Coating Layer Application

The flock coat was installed onto the floor first to allow for entry of the installer into the epoxy primer coated pool. The second and third layers will be applied on the walls first and then to the floor.

Prior to beginning the second layer application, ensure the surface blemishes have been removed and swept clean. Manually adjust the powder feed rate on the machine to the appropriate reduced second coat flow setting. This will reduce the amount of powder being processed by the flame, effectively increasing the total amount of thermal energy available to process the second layer powder and ensure it is completely melted into the flock layer.



If you are completing the second coat on a second day, the surface **MUST** be preheated for proper adhesion.

PROTIP: It is critical to ensure the previously installed flock layer receives sufficient heat during the second layer application to re-melt and flow together to join with the additional coating material being applied in order to form a single, complete, thicker layer to avoid onion peeling.

FAILURE TO FULLY PROCESS THE ADDITIONAL POWDER FILM INTO THE PREVIOUSLY APPLIED MATERIAL LAYER WILL RESULT IN POOR ADHESION TO THE PREVIOUS LAYER. THIS WILL CAUSE AN INEVITABLE DISBONDING FAILURE REFERRED TO AS “ONION PEELING”.

Select a beginning point for wall coating installation and apply the finish in sections around the pool in the same manner and technique as the flock coating material layer. Coat each wall section from the masking at tile/coping down to the floor, through the cove, and onto the floor approximately 12-18 inches. When each pass of 36-42 inches wide is completed down the wall and onto the floor, smoothly transition the spray pattern up the edge of the just completed pass to the top of the next section to be coated, and immediately begin that next section. In this manner, the installation is smoothly transitioned between section passes without the need to turn off the powder flow switch. This ensures the area remains “pre-heated” from the adjacent coating installation pass and will assist in flowing out and blending the coating which, joins the two sections.

Following the installation of the second layer to the walls, move to the deep end of the pool and begin coating material installation to the floor. Work in sections to completely flow out the material and limit any unprocessed overspray to adjacent areas. Completely coat the floor, steps, benches, and any other features in the pool with this second coating material application.

Ensure that proper traverse speed, spray distance, and 50% overlapping of passes are performed to create a visually complete surface. The second coating layer should appear finished, without visual blemishes, streaks, lines, or discoloration blotches. Extreme care must be taken to ensure proper “overspray management” is performed to eliminate the possibility of sending random powder overspray material onto adjacent surfaces. When complete, the second layer should feel very smooth, and exhibit a slight orange peel texture.

Final Third Coat (Glaze Coat) Application

A Final Glaze Coat is applied to ensure total visual and texture uniformity of the completed finish. This final coating layer will melt any loose and under processed material remaining on the surface and blend any visual color and gloss variations, if the first two coating material layers were properly installed.

Prior to beginning, ensure the surface has had all positive blemishes removed and is thoroughly swept to remove all debris. Manually adjust the powder flow on the machine to the further reduced appropriate third layer setting. This will again reduce the amount of powder being processed by the flame, and will further increase the total thermal energy of the system available to completely process the finish.



If you are completing the third coat on a second day, the surface **MUST be clean and preheated for proper adhesion. Make sure traverse speed and heat are even to avoid onion peeling.**

The application technique of the third coating layer differs from the first and second layers in spray distance and traverse speed. The objective is to hold the applicator gun closer to the surface at a distance of approximately two (2) feet. This will cause an increased amount of heat to immediately impact the surface to fully re-melt previous applications to a uniform texture and color blended appearance. The installer will be required to closely monitor the speed of application as not to burn the finish, moving quickly over the surface with pass traverse speeds approximately double that of the initial passes.

PROTIP: Care must be taken not use a spray distance too close to the surface, or visual streaking will occur due to the close, tight spray pattern. A spray distance held too far away from the surface while using the increased pass traverse speed will not allow enough heat to impact the surface to fully melt the new material into the previously applied layers, leaving the surface rough and with a visually different appearance.

Complete the application of this final coat over the entire surface using the glaze coating technique. It is advisable to have another crew member observe this final application so they can point out any visually different areas in the finish in order that they can be addressed by the installer prior to completion of this final coating layer.

Slip Resistant Textured Coating Application

It is advisable to apply a slip resistant texturing on surfaces such as steps, benches, and beach entries to assist in the prevention of accidents at ingress or egress points in a pool. This is accomplished by using a different application technique that applies well adhered, partially melted particles to create a rough, slip-resistant finish. This application is performed following the completion of the ecoFINISH® surface, which has been allowed to cool to ambient temperature.

To apply the slip-resistant finish, manually increase the powder feed rate setting back to the second coating setting used by the installer. The installer will also increase the spray distance of the applicator gun to the surface being coated to approximately three to four feet. Prior to turning the powder feed on, preheat each tread prior to applying the textured finish. Now install the finish at a traverse speed fast enough to deposit powder to the intended surface, but at a rate that will not allow enough heat to dwell and/or build up to fully process the deposited powder coating material. Allow the rough finish to cool. The installer should then attempt to wipe or rub the rough coating from the completed smooth underlying surface to ensure the particles will remain well adhered to. If they can be removed by wiping the surface, reapply additional rough surface coating material while allowing additional heat at the surface to promote improved adhesion. Retest to ensure proper adhesion.

Installation Complete!

Congratulations! You have completed the ecoFINISH® installation process. You can now de-mask the pool, replace the return fittings, drain covers, and reinstall the lights.

Remove the heat tape masking material without damaging the finish by pulling the tape back onto itself, and slightly angled up and away from the completed finish. Never pull the tape straight out and away from the surface, as this represents a tremendous amount of lifting force on the newly completed finish. The epoxy primer bond requires a full 24-hour cure to achieve full strength. After removing from the pool, strip the heat tape from the 9" masking fabric and roll the fabric for reuse on the next installation.

The pool may be immediately filled with water. Follow the simple start-up instructions on the card provided with each box of the powder coating material. The Pool Start-Up Guide referenced in this manual as Appendix B is also available on the website ecofinishcoatings.com.



We strongly advise the addition of Startup Tech to the fill water to reduce the possibility of calcium buildup in addition to minerals and chemicals from contaminating the ecoFINISH® surface.

Once the pool is filled, the filtration system can be started, and chemicals may be added. Hot spa and pool heaters may also be started immediately after the filtration system start.

PROTIP: It is highly recommended to wear protected footwear prior to walking on the newly applied finish to avoid damaging it.

Process Discussion and General Installation Considerations

Coating material melt and flow out is dependent on many conditions such as ambient temperature, wind speed, humidity, surface profile and texture, applicator gun heat, and the powder feed rate. Adjustment of the application spray technique and console applicator gun settings based on these variables may be required. The following information applies in a general sense and may be utilized by the installer to adapt to the specific situation. Carefully monitor spray distance, pass traverse speed, and overlap of passes to ensure the coating is evenly applied, and the material is thoroughly melting.

ecoFINISH® recommends the coating material be installed to a finished thickness of 15-20 mils, which includes 3-5 mils of epoxy primer thickness. Typically, achieving the properly installed thickness is evidenced by no shading being visible through the finish, and that a fully formed, the complete film has been created. A film thickness gage may also be used to determine the actual coating thickness but will leave a pinhole created by the sharpened probe point as it penetrated the finish.

A common problem during installation occurs when water is trapped below the cementitious surface. When the surface is heated with the installation torch, these trapped pockets of water will expand and cause the surface to “pop” during coating application, leaving unsightly surface imperfections that will require repair. Determine if this condition exists prior to beginning the epoxy primer application by heating the entire surface with the weed burner torch to locate any of these potential areas and repair them prior to installation.

Coating over the surface of tile mosaics, tile trim inset into the plaster, or waterline tiles is not recommended. Since the tile and pool shell heat at different rates, the material will melt inconsistently across them, leaving a noticeably different texture and gloss on the finish. More importantly, the coating material and epoxies both have poor adhesion to glazed tile. The suggested method is to heat tape mask them, or remove them and patch the areas with a material similar to the pool shell prior to coating with epoxy primer and installing coating material.

General Installation Considerations:

- Applicator gun air and propane pressure settings – The combustion heat (flame) is controlled by the amount of applicator gun air and propane mixed in the nozzle of the applicator gun. Each of these regulated pressures must be set and maintained at factory instructed pressure levels to ensure adequate heat to both efficiently and thoroughly melt the ecoFINISH® coating material at the desired deposition coating rate.

Low capacity air compressors or low propane pressures will result in an improper air/propane mixture, which will directly affect coating deposition rate, visual appearance, and coating layer integrity. These are manually adjusted settings on the applicator gun console and propane tank regulator. **When using the applicator gun, it is imperative that the installer knows where the emergency shut off valve is located.** It is advised to have a second person from the crew as a visual back up.

- Material Feed Rate – A faster material feed rate will apply more material, but too fast a rate will cause it to remain unprocessed as rough, un-melted particles. Too slow of a powder feed rate may not coat the surface enough with each pass, requiring additional passes and subsequent overheating of the surface to achieve full coverage. This is a manually adjusted setting on the applicator gun console.
- Pass Traverse Speed – If your passes are too fast, not enough material will coat the surface, and you will have to go over the area more than necessary. However, if you move the applicator gun too slowly, there is the potential to burn the epoxy primer or scorch the coating material. **Make sure traverse speed and heat are even to avoid onion peeling.**
- Spray Distance – Spraying farther from the wall will cover a larger area with less material. Spraying closer will cover a smaller area with more material. Additionally, spray distance affects temperature. Spraying too close may burn the finish, while spraying too far will allow the material to cool by the time it hits the surface, and will not provide enough process heat to melt the material evenly. Proper application requires the installer to monitor the powder coating material being applied closely, and vary the spray distance as necessary to ensure the proper amount of powder and heat is applied. Windy conditions will require constant adjustment of applicator gun spray distance, holding closer and farther away, as conditions vary with each wind gust. Be sure to hold the applicator gun at no less than a 45-degree angle toward the floor.
- It may take some practice to achieve the perfect combination of these variables for your particular job. It is suggested that the installer conduct a spray test to a small, obscure area of the surface. Observe how long it takes the material to melt and flow, and use this information as the material is installed to the remainder of the pool.

Process Summary and Review

- Surfaces must be clean, free of oil, grease, and any other surface contaminate.
- Prior to epoxy primer, the entire surface should be swept and vacuumed of all dust, debris, and insects.

- An aggressive acid etch is necessary on all cementitious finishes and a mild acid wash may be required on some other surfaces.
- A pressure wash is required after all acid etching, and Tri-sodium Phosphate or sodium bicarbonate is recommended to be added to the bottom of the pool where excess waste is collected to neutralize the acidic water prior to pumping.
- Epoxy Primer should not be applied in the rain, or if there is a possibility of rain. Any moisture in/on the epoxy primer as it hardens will degrade the integrity of the epoxy primer, and its adhesion and any moisture under the epoxy primer will become heated during the coating process and may cause noticeable imperfections in the finish.
- Any cracks or damaged areas should be repaired. Repair these areas with a material and texture similar to the surface being repaired to ensure even heating and appearance
- Cracks smaller than 1/16" (2mm) generally do not require repair prior to beginning the coating process.
- The epoxy primer requires an aggressive texture to ensure a strong mechanical bond. A texture similar to 60 - 80 grit sandpaper is ideal for cementitious finishes. Fiberglass is required to be aggressively scuffed with 36 - 40 grit coarse sandpaper, and all metals require angular media grit blasting, grinding, or coarse sanding to raise a texture profile. In all cases, the surfaces must "feel" rough, not just visually appear roughened.
- The epoxy primer is supplied in convenient proportioned packages, with each component container having the proper ratio amount. It is important to mix both parts of the Part A with the Part B ecoFINISH® X40 (or X40C) epoxy primer components in a clean bucket using a squirrel type mixer, mixing thoroughly for one minute but no more than two. The mixer must be kept at a slow speed to avoid introducing air into the epoxy primer mixture.
- To ensure proper epoxy primer blending ratios, NEVER MIX PARTIAL EPOXY PRIMER BATCHES from full- size kit bottles. For small batch requirements, pre-order and mix small batch kits from the "Rapid Set Epoxy Primer X40C Minis" packaging.
- When applying to cementitious finishes and after the substrate has aggressively been acid etched, a 50/50 (X40/Acetone) coat must be applied to the entire surface and reapplied (if needed) to seal off the surface porosity and for deep penetration adhesion to the substrate.

PROTIP: If rain or other water is allowed to contact the epoxy primer during its curing cycle, it can inhibit the chemical cure process. If this were to occur, an "Amine Blush" will be evident as a white, cloudy film on the surface of the epoxy primer layer. If this condition is evident, the epoxy primer layer will require a light sanding by hand with coarse sandpaper to roughen the surface. Wet a clean rag with acetone and wipe the surface prior to recoating with another layer of epoxy primer.

- 50/50 epoxy primer should be applied using a 3/4" nap roller, dipped wet rollers directly from the mixing bucket to ensure complete saturation of the cementitious surface.

- 100 % Epoxy Primer should be only be applied using a roller with a 1/4” nap, with the epoxy primer loaded from a plastic lined paint tray. Using a thick nap roller will result in the creation of air bubbles in the epoxy primer, and will apply too much epoxy primer to the surface.
- Do not allow the X40 or X40C to puddle or run. Runs and puddles may be evident if allowed to harden and then flock coated due to their visually different texture from the surrounding surfaces

Advanced Layering Technique

ecoFINISH® coatings of different colors can be layered to create colorful and stylish effects in the finish. Additionally, using ecoFINISH® ecoFX™ stencils, the installer can create intricate designs onto newly installed finishes, or install required commercial markings such as depth markers, no dive symbols, etc. This requires a few additional steps, and should only be attempted on complete surfaces by an installer who has successfully practiced the technique on other surfaces.



When applying multiple layers, take caution to preheat the surface prior to applying the new layer for proper adhesion. Make sure traverse speed and heat are even to avoid onion peeling.

Once the completed coating material finish has been properly melted out and completely cooled, ecoFINISH® ecoFX™ stencils or ecoFINISH® heat tape can be used to outline the desired design. Cover (with ecoFINISH® stencils or ecoFINISH® silicon coated glass tape/masking fabric) any sections within and around the surrounding immediate area of the original finish that you do not want to coat with the second color. Set the Machine Powder Feed rate to a medium setting, such as the normal second coat setting. Material should be applied as a thin layer, with only enough material to cover and flow out into a completely formed film completely. Applying too much coating material will make masking/stencil removal extremely difficult or impossible without damage to area margins during de-masking. Apply a layer of the different contrasting color to the un-stenciled or un-masked area and allow to completely cool.

PROTIP: Do not remove the ecoFINISH® stencil or ecoFINISH® silicone coated glass tape too early or the coating material will stick to the masking).

Remove the stencil or tape from the surface. Some of the adhesive from the stencil or tape may remain on the surface. This can be mostly removed using Acetone. Once the majority of the adhesive has been removed, use the applicator gun torch (with the material feed deactivated) or a non-flame heat gun to melt together the two finishes.

PROTIP: Do not over heat the two colors, because the lower finish will want to bleed through to the top finish. Do not use an open flame other than that of the ecoFINISH® applicator gun to avoid scorching the colored finish.

As with any special techniques beyond basic installation, always test the procedure first on a small area of the pool before committing to any larger designs or patterns to see how the surface responds and to make adjustments to the applicator gun settings based on variable factors such as ambient temperature and humidity.

Appendix

Appendix A – Indoor Installation Checklist

INDOOR INSTALLATION CHECK LIST

- ☐ Ensure all internal building/structure air vents and ductwork is deactivated and sealed to localize any process fumes to the work area.
- ☐ Seal off any internal windows and doors leading to other parts of the building using plastic sheets and tape to prevent any air gaps.
- ☐ Open all nearby windows and doors. Create positive and negative forced air ventilation to properly ventilate work area with clean fresh air and remove all hazardous combustion fumes




(THIS IS REQUIRED FOR ALL INDOOR APPLICATIONS)

- ☐ Take care not to activate the fire alarm system when using the application gun
- ☐ Have Fire extinguisher or fire blanket on site
- ☐ Wear appropriate eye and ear protection
- ☐ Wear proper approved respiratory safety equipment.

Appendix B – Pool Start-Up Guide

ENGLISH



ecoFINISH®
HIGH PERFORMANCE COATINGS

AQUABRIGHT™ STARTUP AND MAINTENANCE PROCEDURE

START UP PROCEDURE

Step 1: Fill the pool with water. WHILE pool is being filled, add McGrayel EasyCare StartUp-Tec dosage per chart below:

Pool size (gallons)	Startup Dosage (must add at initial filling)	
	Summer Start Up	Spring/Fall Start Up
10,000	32 oz. (1 liter)	64 oz. (2 liters)
20,000	64 oz. (2 liters)	96 oz. (3 liters)
30,000	96 oz. (3 liters)	128 oz. (4 liters)
40,000	128 oz. (4 liters)	256 oz. (8 liters)

Step 2: Perform a full professional water analysis to pool water after being filled.
Step 3: Start the filtration system when the pools is full to the middle of the skimmer.
Step 4: Balance water chemistry based on the water analysis done on Step 2.

WEEKLY

Step 1: Balance chlorine levels using Trichloro-S-Triazinetrione.
Step 2: Maintain chemistry parameters shown below:

Ideal Water Chemistry Parameters			
Free Chlorine	1.0 to 3.0	Calcium Hardness	200 to 400
Total Chlorine	1.0 to 3.0	Iron	0
pH	7.6	Copper	0
Total Alkalinity	120 to 150	TDS	<1200

Chemical adjustments are mandatory by the homeowner during the life of the pool.
Step 3: Add maintenance dose of algicide.
Step 4: Shock as needed with Potassium Monopersulfate.

Note: We *DO NOT* recommend using Calcium Hypochlorite and/or floating chemical dispenser as they contain harsh chemicals and will likely bleach the pigment of the aquaBRIGHT™ finish over an extended period of time. Chemicals should always be added to the water, NEVER water to a chemical.

It is the responsibility of the pool owner to ensure pool chemistry remains in industry accepted chemical balance concentration ranges, and all chlorinating agents used are administered, and maintained in the proper manner. Mis-use of Calcium Hypochlorite, such as extreme high concentrations, direct broadcast of into pool, or malfunctioning auto-feeders, may over an extended period of time result in discoloration of the finish.

MONTHLY

Step 1: Add directly to the pool. Add McGrayel EasyCare Beautech dosage per chart below.

Pool size (gallons)	Monthly Treatment	
	Monthly Dosage	Monthly Dosage (salt pools)
10,000	5 oz.	64 oz. (2 liters)
20,000	10 oz.	128 oz. (4 liters)
30,000	15 oz.	192 oz. (6 liters)
40,000	20 oz.	256 oz. (8 liters)

If water hardness level is above 500 parts per million, double the dosage.

Reference: Generic	Product Name
Trichloro-S-Triazinetrione	3" Tablets (for chlorinator use)
Potassium Monopersulfate	Potassium Monopersulfate

ONCE WATER IS BALANCED, HEATER, POOL CLEANERS, SALT WATER CHLORINATORS MAY BE ADDED OR USED.

For any additional care and maintenance information, please contact ecoFINISH®, LLC.

ecoFINISH Start Up Card_En_Fr_Sp_0619

Appendix C– ecoFINISH® Contact Information and Customer Support

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Appendix D – ecoFINISH® Warranties

10 Year Limited Residential Product Warranty



- I. ecoFINISH® LLC ("EF") of Warminster, Pennsylvania, is the manufacturer of aquaBRIGHT™ & polyFIBRO® ("Products") which are only sold by EF to independent dealer contractors ("Dealer"). At the sole option of the retail Dealer, EF offers this 10 Year Limited Residential Product Warranty to the Dealer's Residential customer. This Limited Product Warranty only covers defects in the manufactured material of the Products during the applicable Warranty Period (as defined below) (the "Limited Warranty"). This Limited Warranty starts on the date of your purchase and lasts for 10 years (the "Warranty Period"). The Warranty Period is not extended if we repair or replace the Product. EF may change the availability of this Limited Warranty at our discretion, but any changes will not be retroactive. EF extends this Limited Warranty only to the customer who originally purchased the Products ("You"). It does not extend to any subsequent owner or other transferee of the Products.
- II. This Limited Warranty includes the following:
- A. Chemical Resistant- The Products will not significantly deteriorate due to exposure to appropriate swimming pool chemistry conditions.
 - B. Chalk Resistant- Product colors will not chalk.
 - C. The Products will obstruct growth of mildew on the surface of the sealer film. Resists organic stains. (stain resistant does not mean stain proof)
 - D. Spall Resistant- The Product chemically bonds to the surface and is resistant to spalling or delamination.
- III. This Limited Warranty does not cover, among other exclusions: any defect to the Products due to the negligence of the customer, Dealer, installers, and/or other persons; defects in the installation or faulty installation; failure to maintain the Products properly; unreasonable use or abuse; alterations to the Products; unsatisfactory material choices by You or the installer; accidental damage; element damage such as water or rain; over-heating; freeze/thaw; vandalism; acts of God or causes other than defects in the materials of the Products. Examples of "defects in installation" or "faulty installation" by Dealer, installers, contractors, or any other person involved in the installation process may include the following: improper prepping of the surface, failure to clean the surface pursuant to the Installation Manual's instructions as needed at the time of installation, defective substrates, wall structures that are not built to code - and are not constructed pursuant to all applicable local building or governing agencies, or previous coatings which have lost adhesion and were not properly removed prior to the Product install. This Limited Warranty does not cover deterioration, scratches, any abuse to the finish or wear of the Products that was caused by You post-installation, by moving or dragging equipment, fittings, furniture, or any other physical item over the finished surface. EF is not responsible for the actions and omissions, including negligence, of the installer. Installation workmanship, materials and subsequent materials used in the installation are not covered under this Limited Warranty.
- IV. This Limited Warranty will apply only if the claim is for defective material and such claim is submitted to EF online at ecofinishcoatings.com/warrantyclaimform. EF will evaluate each claim and if it is covered claim, EF will, at its discretion, coordinate the repair or replacement of the defective material with the Dealer. Previously painted surfaces must have paint removed before applying the Products. All surfaces must be properly cleaned with aquaBRIGHT™ & polyFIBRO® approved methods. The Products must be applied in accordance with EF's Installation Manual's instructions.

Name of Customer: _____ Project Address: _____
Customer Telephone: _____ Date Project is Completed: _____
Name of Dealer: _____

Within 60 days of the Date Project is Completed Dealer must provide to EF this completed form including the purchase information associated with the specific customer project in Section IV above. Failure to do so by Dealer may cause the Limited Warranty to be void.

- V. This Ten Year Limited Warranty shall be pro-rated as follows for replacement by EF of any Products with a proven manufacturer material defect:
- | | |
|----------------|--|
| Year One-Five: | EF will replace the Product with a proven manufacturer's defect. |
| Year Six: | EF will replace product valued at 90% of Dealer's prevailing product cost. |
| Year Seven: | EF will replace product valued at 80% of Dealer's prevailing product cost. |
| Year Eight: | EF will replace product valued at 70% of Dealer's prevailing product cost. |
| Year Nine: | EF will replace product valued at 60% of Dealer's prevailing product cost. |
| Year Ten: | EF will replace product valued at 50% of Dealer's prevailing product cost. |

Dealer or its customer shall be responsible for the difference between the EF product allowance above, and the Dealer's retail product replacement costs. All approved warranty claim products will be shipped F.O.B. from EF's corporate office address at 415 Constance Drive, Warminster, PA 18974.

This Limited Warranty does not cover any costs related to the removal, replacement, installation, or labor expenses in connection with the replaced Products. No Dealer or anyone else has authorization to modify this Limited Warranty. All dealers of ecoFINISH® products are independently owned and operated, and all Product installations are the sole responsibility of each authorized Dealer. It is the sole responsibility of the Dealer's or customer to employ only competent installers in order that the Products are properly installed. EF will not be responsible for any form of special, indirect, accidental, lost profits or consequential damages caused thereby. All warranty claims submitted require proof of purchase. Failure to strictly comply with the conditions set forth in this Limited Warranty will make this Limited Warranty null and void.

- VI. THIS WARRANTY SUPERCEDES ANY VERBAL OR WRITTEN AGREEMENTS. EF's HEREBY EXCLUDES ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THIS FORM OF LIMITED WARRANTY IS ONLY AVAILABLE FOR PURCHASES OF PRODUCTS AFTER JANUARY 1, 2020.

NOTE: THIS LIMITED WARRANTY WILL APPLY ONLY IF THE FOLLOWING PROJECT INFORMATION, ALONG WITH THE DEALER'S CUSTOMER'S NAME, ADDRESS AND TELEPHONE NUMBER, ARE SUBMITTED TO EF BY THE INDEPENDENT DEALER AT THE TIME OF THE DEALER'S PROJECT.

PROJECT INFORMATION

Area Surfaced: _____

Previous Surface Type: _____

Surface Color: _____



Appendix D – ecoFINISH® Warranties

COMMERCIAL USE – LIMITED PRODUCT WARRANTY



I. ecoFINISH® LLC ("EF") of Warminster, Pennsylvania, is the manufacturer of aquaBRIGHT™ & polyFIBRO® ("Products") which are only sold by EF to independent dealer contractors ("Dealer"). At the sole option of the Dealer, EF offers this ten (10) Year Limited Product Warranty for its industrial/commercial/institutional customers. This Limited Warranty only covers defects in the manufactured material of the Products during the applicable Warranty Period (as defined below) (the "Limited Warranty"). This Limited Warranty starts on the date of your purchase and lasts for ten (10) years (the "Warranty Period"). The Warranty Period is not extended if we repair or replace the Product. EF may change the availability of this Limited Warranty at our discretion, but any changes will not be retroactive. EF extends this Limited Warranty only to the commercial customer who originally purchased the Products ("You"). It does not extend to any subsequent owner or other transferee of the Products.

II. This Limited Warranty includes the following:

- A. Chalk Resistant- Product colors will not chalk.
- B. The Products will obstruct growth of mildew on the surface of the sealer film. (stain resistant does not mean stain proof)
- C. Spall Resistant- The Product chemically bonds to the surface and is resistant to spalling or delamination.

III. This Limited Warranty does not cover, among other exclusions: any defect to the Products due to the negligence of the customer, Dealer, installers, and/or other persons; defects in the installation or faulty installation; failure to maintain the Products properly; unreasonable use or abuse; alterations to the Products; unsatisfactory material choices by You or the installer; accidental damage; element damage such as water or rain; over-heating; freeze/thaw; vandalism; acts of God, bleaching caused by aggressive water chemistry found at commercial pools, or causes other than defects in the materials of the Products. Examples of "defects in installation" or "faulty installation" by Dealer, installers, contractors, or any other person involved in the installation process may include the following: improper prepping of the surface, failure to clean the surface pursuant to the Installation Manual's instructions as needed at the time of installation, defective substrates, wall structures that are not built to code - and are not constructed pursuant to all applicable local building or governing agencies, or previous coatings which have lost adhesion and were not properly removed prior to the Product install. This Limited Warranty does not cover deterioration, scratches, any abuse to the finish or wear of the Products that was caused by You post-installation, by moving or dragging equipment, fittings, furniture, or any other physical item over the finished surface. EF is not responsible for the actions and omissions, including negligence, of the installer. Installation workmanship, materials and subsequent materials used in the installation are not covered under this Limited Warranty.

IV. This Limited Warranty will apply only if the claim is for defective material and such claim is submitted to EF by Dealer online at www.jotform.com/form/70665744521155. EF will evaluate each claim and if it is covered claim, EF will, at its discretion, coordinate the repair or replacement of the defective material with the Dealer. Previously painted surfaces must have paint removed before applying the Products. All surfaces must be properly cleaned with aquaBRIGHT™ & polyFIBRO® approved methods. The Products must be applied in accordance with EF's Installation Manual's instructions.

Name of Customer: _____ Project Address: _____

Customer Telephone: _____ Date Project is Completed: _____

Name of Dealer: _____

Within 60 days of the Date Project is Completed Dealer must provide to EF this completed form including the purchase information in Section IV above and copies of all EF invoices and each respective invoice number(s) associated with the specific customer project. Failure to do so by Dealer may cause the Limited Warranty to be void.

V. This Ten Year Limited Warranty shall be pro-rated as follows for replacement by EF of any Products with a proven manufacturer material defect:

- Year One-Five: EF will replace the Product with a proven manufacturer's defect.
- Year Six: EF will replace product valued at 90% of Dealer's prevailing product cost.
- Year Seven: EF will replace product valued at 80% of Dealer's prevailing product cost.
- Year Eight: EF will replace product valued at 70% of Dealer's prevailing product cost.
- Year Nine: EF will replace product valued at 60% of Dealer's prevailing product cost.
- Year Ten: EF will replace product valued at 50% of Dealer's prevailing product cost.

Dealer or its customer shall be responsible for the difference between the EF product allowance above, and the Dealer's retail product replacement costs. All approved warranty claim products will be shipped F.O.B. from EF's corporate office address at 415 Constance Drive, Warminster, PA 18974.

This Limited Warranty does not cover any costs related to the removal, replacement, installation, or labor expenses in connection with the replaced Products. No Dealer or anyone else has authorization to modify this Limited Warranty. All aquaBRIGHT™ & polyFIBRO® Dealers are independently owned and operated, and all Product installations are the sole responsibility of each authorized Dealer. It is the sole responsibility of the Dealer's or customer to employ only competent installers in order that the Products are properly installed. EF will not be responsible for any form of special, indirect, accidental, lost profits or consequential damages caused thereby. All warranty claims submitted require proof of purchase. Failure to strictly comply with the conditions set forth in this Limited Warranty will make this Limited Warranty null and void.

VI. THIS WARRANTY SUPERCEDES ANY VERBAL OR WRITTEN AGREEMENTS. EF HEREBY EXCLUDES ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THIS FORM OF LIMITED WARRANTY IS ONLY AVAILABLE FOR PURCHASES OF PRODUCTS AFTER JANUARY 1, 2020.

NOTE: THIS LIMITED WARRANTY WILL APPLY ONLY IF THE FOLLOWING PROJECT INFORMATION, ALONG WITH THE DEALER'S CUSTOMER'S NAME, ADDRESS AND TELEPHONE NUMBER, ARE SUBMITTED TO EF BY THE INDEPENDENT DEALER AT THE TIME OF THE DEALER'S PROJECT.

PROJECT INFORMATION

Area Surfaced: _____

Previous Surface Type: _____

Surface Color: _____



Appendix E

Equipment required for operation of ecoFINISH® applicator systems:



AIR COMPRESSOR

Preferably Rotary-Screw type, capable of a sustained minimum output air volume of 40 cfm at 110 psi.



AIR HOSES, 3/4"

Industrial air hoses with universal "claw foot" twist lock couplers on each end. Usually lengths available in 50 ft sections. Purchase enough to reach from compressor to pool side.



Included in Turn Key package.



OIL/WATER SEPARATOR

High volume with minimum of 1/2" inlet and outlet thread size such as the SPEEDAIRE Model 4ZL09. Install universal "claw foot" twist lock couplers on inlet and outlet of separator. Mount separator on stand to allow for freestanding vertical installation in the middle of at least two lengths of air hose connecting compressor to ecoFINISH® applicator equipment.



Included in Turn Key package.



PROPANE CYLINDERS

100 lbs (25 gallon) minimum size. A minimum of two tanks are suggested to reduce the possibility of work stoppages. It is also helpful to have a plastic tub or garbage can with water in which to place the cylinder during use to reduce cylinder freezing and the resultant drop in pressure.

X 2



X 2

100 FT PROPANE HOSES 3/8"

Left hand thread propane approved fittings on hose. It is suggested that several lengths of 50 to 100 feet sections be purchased so that the propane cylinders may remain at the work vehicle and compressor location. A left hand thread male/male coupler will be required to join hose sections.

Note: Propane components and length of hose must comply with all applicable Federal, State, and Local regulations.

Propane Regulator is supplied by ecoFINISH® with each applicator equipment system.



Included in Turn Key package.



PRESSURE WASHER

3000 psi or greater with TURBO NOZZLE

SAFETY



HALF MASK RESPIRATOR

NIOSH approved for chemical vapors and dust.



SAFETY GLASSES



DISPOSABLE GLOVES



FIRE EXTINGUISHER



9" PAINT ROLLER

X 3



9" PAINT ROLLER COVERS

1/4" nap and 3/4" . New covers necessary for both the 50/50 epoxy installation, and the 100% epoxy installation. At least 4 to 6 are used for each job. **Suggested bulk purchase item.

X 6



2" PAINT ROLLER w/ NAP



PAINT ROLLER EXTENTION HANDLES

X 3



PAINT BRUSHES

Inexpensive disposable type, 1-1/2 "wide. Several will be used on each job. **Suggested bulk purchase item.



POLY BUCKETS

X 4



CLEAN CLOTH RAGS



CANVAS DROP CLOTH



PUSH BROOM, MEDIUM STIFFNESS



SHOP VACUUM, WET/DRY



UTILITY KNIFE



PUDDY KNIFE, 1-1/2 WIDE

X 2



4" PAINT SCRAPER

Replaceable razors + Spare replacement razors



PADDLE MIXER

Plastic or metal with 3/8 electric cordless drill motor for mixing epoxy



Included in Turn Key package.



WATERING CAN

X 2



HANDHELD ORBITAL SANDER

With sand paper disks (40 or 50 Grit). Necessary to smooth uneven pool surfaces.



GRINDER

MOST SUPPLIES CAN BE RENTED OR PURCHASED FROM LOCAL INDUSTRIAL RENTAL CENTERS



WEED BURNER

Long handled flame torch. Rated around 50,000 but output.
Used to dry wet areas of the pool.



Included in Turn Key package.



5 GALLON PROPANE TANK

For operation of Weed Burner



IGNITER SPARK STRIKER

Must be flint for ignition of ecoFINISH® applicator gun. Butane lighters will NOT work.



Included in Turn Key package.

X 2



ACID BRUSH

Stiff plastic bristles

X 2



PURE MURIATIC ACID

Suggested volume purchased based on job.



ACETONE

1 Gallon cans. Will use multiple gallons for 50/50 mix based on pool size. Suggested volume purchase.



SILICONE MASKING CLOTH

Purchased direct from ecoFINISH®. This high temperature masking cloth is used to mask the water line tile and coping. It is reusable for many applications. Each roll is 60 feet long. Order enough lengths to mask the largest anticipated pool (and spa) perimeter. [Submit order to po@ecopoolfinish.com](mailto:po@ecopoolfinish.com)



HIGH TEMPERATURE TAPE

Purchased direct from ecoFINISH®. Tape uses high temperature silicone adhesive that will not leave a residue after being heated. ecoFINISH® Quote Worksheet will specify how many rolls of tape are required for each job. [Submit order to po@ecopoolfinish.com](mailto:po@ecopoolfinish.com)



X40 or X40c EPOXY

Purchased direct from ecoFINISH®. Ecofinish Quote Worksheet will specify how much epoxy will be required for the specific pool size. [Submit order to po@ecopoolfinish.com](mailto:po@ecopoolfinish.com)



RED PIGMENT

For use with 100% mixtures of X40 and X40C Epoxy primer.



X40-200 HIGH BUILD EPOXY-TROWEL GRADE

Designed to be used as a flexible, crack bridging membrane, or joint filler where substrate movement is evident or is anticipated or maybe subject to vibration. X40-200 HBT is also used as waterproofing membrane and coating exhibiting good resistance to acids, alkalis, and most solvents



aquaBRIGHT™/polyFIBRO®

Pool Finish Powder. Purchased direct from ecoFINISH®. Ecofinish Quote Worksheet will specify how much powder will be required for the specific pool size. Shipped in 40 lb boxes, so round up requirements to multiples of 40 lbs for order. [Submit order to po@ecopoolfinish.com](mailto:po@ecopoolfinish.com)

Additional useful items that may be required:

- ☐ Fast-setting cement for patching pool surfaces or repairing weeping pool shell prior to coating installation.
- ☐ Tile grout sponges.
- ☐ Industry approved brand or similar fiberglass body filler for use to patch fiberglass pools only.
- ☐ Adjustable wrenches (2).
- ☐ Channel Lock Pliers.

Company Team Leader: _____

Date Submitted: _____

EcoFINISH Trainer: _____

Date Submitted: _____

MOST SUPPLIES CAN BE RENTED OR PURCHASED FROM LOCAL INDUSTRIAL RENTAL CENTERS

Additional useful items that may be required:

- ☐ Sequestering Agents. ecoFINISH® conveniently carries Beautec®, Scaletec Plus® and Startup-Tec®, which can be ordered at po@ecopoolfinish.com.
- ☐ Fast-setting type of cement for patching pool surfaces or repairing weeping pool shell prior to coating installation.
- ☐ Tile grout sponges.
- ☐ Industry approved brand or similar fiberglass body filler for use to patch fiberglass pools **only**.
- ☐ 5" handheld orbital sander.
- ☐ Sand paper discs for above sander (40 or 50 grit).
- ☐ Adjustable wrenches (2).

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ecoFINISH®
415 Constance Drive
Warminster, PA 18974

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