

INSTALLATION GUIDELINE



FLOOR-ESSENCE 'METALLIC' FLOOR SYSTEM

The purpose of this document is to provide a brief overview for the coating installer as to some of the basic application techniques for installing the FLOOR-ESSENCE FLOOR SYSTEM. As a guide this document is not intended to answer all of your questions but rather to provide the basic understanding of how this particular system is installed.

INTRODUCTION

The following are guidelines based on the best methods to achieve an elegant and truly unique floor system without sacrificing quality and durability. The basic steps for the installation of the FLOOR-ESSENCE Floor System include :

1. Surface Preparation
2. Pigmented Primer Coat
3. Floor-Essence Coat
4. Clear topcoat [epoxy, polyaspartic or polyurethane]

Due to the unusual qualities and characteristics of the FLOOR-ESSENCE Flooring, there is no right or wrong way to install this truly unique system. Every floor will have its own distinct appearance or 'effect', which can be created by an almost unlimited variety of creative application techniques. Do some experimenting before tackling your first project, it is essential to have a "trial run" with this product to become familiar and comfortable with a proven procedure / technique.

SURFACE PREPARATION

TESTING : Obviously, the method of surface preparation will depend on the condition of the substrate [refer to Rock-Tred's Surface Preparation Guidelines]. However, regardless of the method of preparation utilized, and whenever practical or reasonable, it is a good practice to test the project environment for :

- RH humidity / Dew point
- PH of the substrate
- Substrate temperature
- Ambient (air) temperature
- Moisture Vapor Emission Rate (MVER)

PREPARATION : Surface preparation should always be performed by 'mechanical' abrasion, preferably shot-blasting or with a planetary grinder, following ICRI Guidelines CSP-2 OR CSP-3 [www.icri.org].

Ideally, the substrate should be 'smooth' and level and free of as many imperfections as possible in order to allow for a uniform and 'glass-like' finished system. Therefore, in most cases grinding is the preferred method.

Cracks, joints, voids, gouges, and imperfections in the substrate should all be filled or repaired prior to applying the primer coat.

- When grinding the substrate, repairs can be made prior to grinding.
- When shot-blasting is utilized, repairs should be performed after preparation.

PRIMER COAT

PRIMER COAT: Priming the substrate is a crucial step in the FLOOR-ESSENCE Floor System installation, and every precaution should be taken to avoid out-gassing and/or contamination of the primer prior application of the Floor-Essence Coat. Always use the recommended "Pigmented" primer and apply at the recommended spread rate in order to allow for a smooth surface (texture).

Although proper pigment load is critical for many coating applications, this is not the case with the FLOOR-ESSENCE Primer Coat. The main objective of the pigmented primer is to produce a 'background' that hides any imperfections in the substrate, at the same time the colorant helps to add exceptional depth and intensity to the finished system appearance.

Different colored primers have different light reflective and/or light absorbing qualities and, therefore, can change the overall appearance of the finished floor. We highly recommend using a black [or dark] colored primer or background color for each of the FLOOR-ESSENCE colors. Basically, the black color helps greatly enhance the depth and reflective qualities of the system while standardizing the "System" and providing more predictable results regardless of the FLOOR-ESSENCE color selected.

MIXING : Use POXI-ROCK PRIMER – 100% solids epoxy [with 2:1 volume mix ratio] with RTE COLORANT [Black – D300-C08]

- For best results, always refer to the POXI-ROCK PRIMER and RTE COLORANT Product Data Sheets **AND** Rock-Tred's INSTALLATION GUIDELINES prior to mixing or application of the products.
- Pour the Poxi-Rock Primer RESIN component into a clean container, add the appropriate amount of RTE Colorant [*typical: 1 each – 24 oz. BAG-PAK™ of colorant to 1 each - 3 gallon unit of Poxi-Rock Primer*] and mix for one (1) minute with a slow speed mixer equipped with a Jiffy mixing blade.
- Pour the Poxi-Rock Primer HARDENER component into the blended Resin and Colorant and mix for an additional 2 minutes with a slow speed mixer equipped with a Jiffy mixing blade.

APPLICATION :

- Once the primer is thoroughly mixed, pour the contents of the container on the surface of the substrate in a “ribbon” and spread using a squeegee, and then back-roll with a lint-free roller cover.
- Apply the mixed primer [Resin, Hardener, & Colorant] at a minimum rate of approximately 160 sq. ft. / mixed gallon [10 mils WFT]. Depending on substrate condition / texture, a thicker application may be required.
- Allow the primer to cure completely before applying the FLOOR-ESSENCE Coat. Typically 8 to 12 hours (minimum) or overnight - depending on substrate, material and air temperatures.

FLOOR-ESSENCE COAT

FLOOR-ESSENCE COAT: Once the primer has cured sufficiently, and prior to applying the FLOOR-ESSENCE Coat, inspect the primer and remove or repair as may be needed. The FLOOR-ESSENCE Coat must be applied within 24 hours after application of the primer, or additional preparation to the primer may be required.

The FLOOR-ESSENCE Coat combines a clear cyclo-aliphatic epoxy with one (1) of eight FLOOR-ESSENCE pigments [refer to the FLOOR-ESSENCE Color Chart]. Although several of Rock-Tred’s 100% solids cyclo-aliphatic epoxies may work for this system, we have found that CHEM-ROCK MV works the best with the Floor-Essence pigments and produces the most reliable results. Once the epoxy and pigment have been mixed together and applied to the primer, the ‘MAGIC’ of the FLOOR-ESSENCE System begins. Every floor installation will have its own distinct appearance or ‘effect’, created by an almost unlimited variety of creative application or “finishing” techniques. In this document we will cover three (3) basic techniques.

THE FOLLOWING MIXING INSTRUCTIONS ARE THE SAME FOR ALL THREE (3) TECHNIQUES :

MIXING : Use CHEM-ROCK MV for best results – 100% solids epoxy [with 2:1 volume mix ratio] with FLOOR-ESSENCE PIGMENT [colors 328-1 THRU 328-8]

- For best results, always review and refer to the CHEM-ROCK MV product data and MSDS sheets, the FLOOR-ESSENCE System Sheet, as well as Rock-Tred’s INSTALLATION GUIDELINES prior to mixing or application of the products.
- Pour the Chem-Rock MV RESIN component into a clean mixing vessel, add two (2) containers [*each container holds 8 ounces of pigment (by weight)*], or 16 ounces total (by weight) of Floor-Essence Pigment to one 3-gallon unit of epoxy, and thoroughly mix the RESIN and PIGMENT for one (1) minute with a slow speed mixer equipped with a Jiffy mixing blade. ***Allow the mixed RESIN and PIGMENT to stand (or meld) for 20 to 30 minutes prior to adding the HARDENER.***
- Before adding the HARDENER, remix the blended RESIN and PIGMENT once again to insure that the pigment is dispersed and has not settle in the

bottom of the mixing vessel – add the Chem-Rock MV HARDENER component into the blended Resin and Floor-Essence Pigment and mix for an additional 2 minutes with a slow speed mixer equipped with a Jiffy mixing blade.

APPLICATION :

- Once the RESIN, HARDENER, and FLOOR-ESSENCE Pigment have been thoroughly mixed, immediately pour the entire contents of the mixed container on the surface of the cured primer in a ribbon to prevent the pigment from settling to the bottom. Spread out the product using a squeegee and then back-roll lightly with a lint-free roller cover. The potlife (or working time) of the Chem-Rock MV is approx. 21-25 minutes @ 75⁰ F.

NOTE: It is not necessary to ‘back-roll’ in even straight strokes. In fact, back-rolling in a completely random or haphazard pattern will help to add dimension and uniqueness to the finished floor system.

- The FLOOR-ESSENCE Coat [Resin, Hardener, & Pigment] should be applied at a minimum spread rate of approximately 100 to 80 sq. ft. / mixed gallon [or 16 to 20 mils WFT].

WARNING : The mixed FLOOR-ESSENCE material should not be applied thinner than 100 sq. ft. / gallon [16 mils WFT]. When applied too thin, the ‘effect’ diminishes substantially and will not allow FLOOR-ESSENCE to create the desired effect. If project conditioned require a thicker application, the “effect” can still be achieved, but it is highly recommended that a sample be done to verify / confirm that the appearance is acceptable.

- Once the Floor-Essence material has been spread at the recommended rate, allow the material to ‘self-level’ and leave untouched for approximately 30 to 60 minutes (depending on temperatures) before proceeding with one, ***or any COMBINATION***, of the following techniques :

FINISHING TECHNIQUE ONE : “HAMMERED METAL”

REQUIRED TOOLS : Spray or squirt Bottle filled with MEK

- After waiting 5-10 minutes, back-roll the FLOOR-ESSENCE Coat using irregular strokes and immediately squirt or “spritz” the entire surface with the MEK from a squirt bottle. Change the height of the bottle [*distance from floor surface*] in order to get various size spots – for the appearance of hammered metal.

FINISHING TECHNIQUE TWO : “CULTURED STONE”

REQUIRED TOOLS : A 9” loop or rug roller

- After waiting 5-10 minutes, back-roll the FLOOR-ESSENCE Coat with a 9" loop or carpet roller – for the appearance of a cultured stone.

FINISHING TECHNIQUE THREE : “BROKEN GLASS”

REQUIRED TOOLS : Several # 12 copper wires mounted on a broom handle

- After waiting 5-10 minutes, score or scrape the wire through the ‘wet’ FLOOR-ESSENCE Coat with long irregular, and random, strokes. Immediately squirt or “spritz” the entire surface with the MEK from a squirt bottle to help “meld” or soften the lines. Change the height of the bottle [*distance from floor surface*] in order to get various size spots - for the appearance of broken glass.

REMEMBER . . . All three (3) techniques can be combined, or you may be able to develop your own technique and distinctive look through trial & experimentation.

TOPCOAT(S)

TOPCOAT(S) : The application of a clear UV resistant / “wear” coat over the FLOOR-ESSENCE Coat is highly recommended for additional protection and durability. The finish or topcoat must be applied within 24 hours after the application of the FLOOR-ESSENCE Coat has been completed.

There are several optional clear topcoats available for this application depending on the final appearance desired and eventual use of the area [i.e. – foot traffic, lift truck, chemical exposure, etc.]. A clear ‘finish’ will also add additional depth, durability, and luster to the overall appearance of the system :

- CHEM-ROCK MV – 100% solids, 2 component gloss epoxy
- CHEM-THANE 509 – 56% solids, 2 comp. high chemical resistant polyurethane, available in gloss or satin finishes.
- CHEM-THANE WB – 54 to 55 % solids, 2 comp. water-based polyurethane, available in gloss, satin, or matte finishes.
- CHEM-THANE P Series – 100% solids, 2 component polyaspartic, available in 3 version of cure.

Refer to the individual Product Data Sheets for each product shown above to help select the most appropriate coating; or contact ROCK-TRED directly for further recommendations and/or technical assistance.

MIXING : Use one of the ‘Clear’ products shown above.

Make sure to apply the topcoat within 24 hours after the application of the FLOOR-ESSENCE Coat has been completed, so that additional surface preparation is not necessary.

- For best results, always refer to the individual Product Data Sheet and MSDS sheet for the product selected. **PLUS** review Rock-Tred's INSTALLATION GUIDELINES prior to mixing or application of any products.
- It is vital that you read, review and know the volume mix ratio and recommended spread rates for the selected product, prior to mixing and application.
- Take every precaution necessary to apply the selected topcoat, by using a clean mixing blade, at a low speed to avoid injecting air, new or clean squeegee, and lint free or synthetic mohair roller covers.

ADDITIONAL INSTALLTION TIPS

- The best rule is to have the right tools and equipment on-site, and always have "back-ups" available to avoid delays or mistakes.
- Measure out the anticipated product spread rate and 'mark' with a piece of tape (or a chalk) for each of the initial batches based size of mixed unit.
- Check to make sure that temperatures are dropping and not increasing when placing any coating, especially primers, over a concrete substrate. Rising temperatures can cause bubbles or create other problems.
- Have your crew take the time to clean squeegees and spike shoes prior to coating; dried material that falls into the 'wet' material or contaminants from unclean tools can leave "lumps" or create unwanted 'fish-eyes' in the finished system. *This extra amount of time is well worth the effort.*
- Whenever feasible, start and stop the coating application at an expansion joint or saw cut, this eliminates the need to keep a 'wet edge' and also helps prevent potential problems with color batches.
- It is always a good practice to provide the customer with copies of the Product data Sheets [PDS] and Material Safety Data Sheets [MSDS] prior to commencing the project.

FOR A SUCCESSFUL INSTALLATION :

- Always refer to product data sheets for each product used.
- Always follow mix products thoroughly according to instructions.
 - Always wear protective clothing and eye wear.
 - Always make sure to keep a safe work site.
 - Always use common sense and follow procedures.
- Always contact ROCK-TRED for technical assistance or questions with regard to specific products, mixing directions, and/or installation procedures.