Description:

E4E-100 ROADRUNNER is a clear 100% solids, low viscosity cycloaliphatic epoxy system is primarily used for a fast cure floor primer, cove base, laminating, flooring flood coats, and a pebble stone binder. It contains no VOCs and is relatively moisture insensitive. It can be used to restore deteriorated floors or protect new floors. E4E-100 ROADRUNNER provides excellent resistance to abrasion and chemicals. E4E-100-ROADRUNNER meets all kinds of requirements such as durability & performance, as well as aesthetics. This seamless coating offers an unlimited choice of color, and a smooth or non-slip finish can be achieved using very fine to very aggressive aggregates.

Advantages of our E4E-100 ROADRUNNER, a Cycloaliphatic Epoxy vs. Conventional Epoxy are:

- No amine blush
- Excellent penetrating characteristic
- Bonds well, strong and durable
- Excellent gloss and clarity
- Excellent chemical resistance
- Self-leveling
- No sanding between coats

Uses Include:

- Laminating Boats and Aircraft Using Fiberglass, Carbon Fiber, or Kevlar Cloth
- Building “Stitch and Glue” Boats
- Potting Electronic Assemblies
- Potting Specimens for Measurement
- Coating Wood and Concrete
- Bonding Wood, Metal, Concrete, and Most Plastics
- Flooring Primer & Color Coat
- Pouring Countertops, Tabletops and Bar Tops

Primary Flooring Applications

- Aircraft hangers
- Assembly areas
- Classrooms
- Clean rooms
- Laboratories
- Areas of light manufacturing
- Mechanical rooms
- Walkways

Specifications:

Mix Ratio:	2 parts Resin to 1 part Hardener by volume or weight
Mixed Viscosity:	600cps
Color:	Clear
Work Life:	30 minutes@72F and 50% atmospheric rH (using at least 8 oz. resin and 4 oz. hardener)
Re-coat Window:	24 hours@72F and 50% atmospheric rH (using at least 8 oz. resin and 4 oz. hardener)
Shore D Hardness:	80-85
Shear Strength:	2500 psi
Tensile Strength:	10,500 psi
Flexural Strength:	17,500 psi
Modulus of Elasticity:	5.7 x 10_6 psi
Pot Life:	12-15 Minutes
Packaging:	2.5 Gallons

*Epoxy is NOT UV resistant–it yellows in sunlight. **

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Directions for use:

Directions for use as a laminating epoxy:

Double Mix and Pour Method: Mix 2 parts E4E-100 ROADRUNNER to 1 part Hardener. Mix the two components together in a plastic container for 2 minutes, then transfer the mixture to another plastic container and mix them again for another 2 minutes. The theory is that the liquids clinging to the sides and bottom of the containers don't get mixed well. By transferring the mixture to another container, you are assured that everything is well mixed.

NEVER mix less than 4 ounces of resin and 2 ounces of hardener together—it will NOT cure!

Also, this smaller quantity of mixed resin and hardener may take up to 4 times as long to cure (i.e. 96 hours instead of 24 hours to cure).

To avoid excess heat from the exothermic reaction, mix small batches until you are familiar with using this material. If laminating with cloth, it is best to apply subsequent layers within 18 hours of each other.

Never mix less than about 4 ounces of resin and 2 ounces of hardener. When manufacturers design and test their resins, they normally write the specifications for 100 gram batches, which is about 3 ounces. There are two bad things that can happen when mixing a smaller batch. If the sample is too small, it is much more difficult to get the mix ratio correct. These mixtures create an exothermic reaction, meaning that they generate heat in order to cure. A tiny batch does not generate enough heat to cure the resin properly.

Do not mix the entire amount of resin and hardener together at once. The larger the batch, the more exotherm or heat is generated in the cure cycle. If pouring a large table top, mix smaller batches to make the process more manageable. Thickness of the pour also affects the exotherm and cure speed. 3/8" is about the maximum thickness to pour at one time for most epoxies.

Don't vary the mix ratio. Varying the mix ratio usually results in a mess. Too much hardener will cause the epoxy to turn to rubber. Too much resin will result in uncured sticky patches.

Do NOT add more hardener in order to speed up the cure time. More hardener ruins the mix ratio and makes the resin cure to rubber and stay that way! Use either a heat gun (NOT a blow dryer) or a floor heater to hasten the cure time.

Mix and pour everything twice. Please see Double Mix and Pour instructions above.

Mix in plastic containers.

Avoid mixing with drill motors. Drill motors don't get into every corner of the mixing container. Drills spin too fast, they can generate friction in the resin causing it to exotherm out of control resulting in premature curing. Powered mixing can generate a lot of air bubbles which will result in a lot of extra work in the end.

Applying multiple coats. You can apply multiple coats of E4E-100 ROADRUNNER if you wait about 12 hours (at 70F) between coats. See Priming Wood for Bartop or Tabletop Coating for more information.

Epoxy Stops Curing at 50 degrees. Warm the ambient temperature above 50 degrees and E4E-100 Roadrunner will start curing again.

Priming Wood for Bartop or Tabletop Coating: There are many good reasons to apply a prime coat of epoxy to your wood before the flood coat. The primary reason is to seal the wood to prevent bubbles in the flood coat. If the wood is old or distressed, has voids in the grain, is laminated like butcher block, or if the edge treatment has a seam with a paper thin gap, then the epoxy will find those openings and slowly seep into them. The result is that after you remove all the bubbles with the heat gun, new bubbles will slowly form.

Because there are so many types of wood in so many different conditions, always apply a prime coat first.

To apply a prime coat, mix the hardener and resin together and apply a thin coat to the raw wood with a brush or roller. If there are no large voids and you only need to seal the wood grain, then you can rub on the mixed epoxy with a cloth. The key is to apply a thin coat that does not have enough depth to create bubbles, but is thick enough to fill and seal any gaps. After this coat cures (usually overnight), you can then apply a flood coat with much higher confidence that the only bubbles you will have are bubbles that were introduced during mixing.

Directions for use:

Directions for use as a Pebblestone Binder:

E4E-100 ROADRUNNER is a two component, 100% solids, low viscosity, moisture tolerant, high strength epoxy formulated specifically for the bonding of decorative pebbles to structural substrates. When applied with aggregate E4E-100 ROADRUNNER has a 4-6 hour dry time (depending on temperature). E4E-100 ROADRUNNER covers approximately 83 sq ft per 2 1/2 gallon kit when mixed with 200 lb of 1/4" x 5/16" aggregate laid at 1/2" thick. Can be applied up to 1 1/2" thick. Coverage will vary depending on condition of surface, size of the aggregate and desired thickness.

Directions for use in the Floor Coating Industry:

E4E-100 ROADRUNNER can also be used in the flooring industry. As an epoxy primer, E4E-100 ROADRUNNER, can help to help further increase the system's bond to its substrate.

Surface Preperation:

The surface to be coated must be well prepared. Remove dust, laitance, grease, oils, dirt, impregnating agents, foreign matter, any previous coatings, and disintegrated substances by mechanical means such as shot-blasting (BLASTRAC) or any other approved method to obtain an ICRI-CSP 3-4 profile. The compressive strength of the concrete must be at least 25 MPa (3625 lbs/in2) after 28 days and the tensile strength at least 1.5 MPa (218 lbs/in2).

Mixing:

The products must be conditioned at a temperature between 18 ° C (65 ° F) and 30 ° C (86 ° F).

Pre-mixed color or clear (A): Mix the resin part (A) perfectly before pouring the hardener (part B) according to the indicated mixing ratio. Depending on product amount and size of mixing equipment, mix for 1 to 2 minutes at low speed (300 to 450 rpm). During mixing, scrape the walls and bottom of the container at least once with a trowel to obtain a homogeneous mixture. As the pot life is VERY limited, prepare amount of desired product as required in order to avoid any loss.

Part (A) when adding color pod: Incorporate a full colored container into the clear part (A), and then thoroughly mix until the color is uniform (one colored container pod per part A gallon) before pouring in the hardener (part B) according to the indicated mixing ratio. Depending on product amount and size of mixing equipment, mix for 1 to 2 minutes at low speed (300 to 450 rpm). During mixing, scrape the walls and bottom of the container at least once with a trowel to obtain a homogeneous mixture. As the pot life is VERY limited, prepare amount of desired product as required in order to avoid any loss.

Reduce the amount of each mixture by 2 - 3 times, compared to a standard epoxy

When applied as a floor primer, E4E-100 ROADRUNNER has a 2-3 hour dry time (depending on temperature).

- Coverage on prime coats is approximately 200 sq ft per kit.

When applied as a basecoat for a flake or neat system, E4E-100 ROADRUNNER has a 4-6 hour dry time (depending on temperature).

- Coverage on flake basecoat is approximately 125 sq ft per kit.

When applied as a cove base, E4E-100 ROADRUNNER has a 4-6 hour dry time (depending on temperature).

- Mixture: 96oz of A to 32oz of B to 25 lbs of Silica Sand to approximately 32-48oz fumed silica
- Mixing: Mix the part A and part B with the silica sand. Then add fumed silica (approximately 32-48oz) until it forms a play dough consistency.
- Application: Lay a strip of material on the floor. Then use a dry wall knife to pull the material vertically up the wall. Next, smooth it out with a 1inch cove trowel, spraying Xylene on it to reduce sticking of the material to the trowel.

Tips for Success:

Coating: If using E4E-100 ROADRUNNER for coating, please pour the mixed epoxy into a roller pan or large dish tub in order to extend the pot life.

Storage: Epoxy resins tend to freeze even at fairly high temperatures, 70F. If allowed to freeze, "epoxy ice" can form in the container. It usually looks like swirls of white stuff suspended in the resin. It can be reconstituted by warming at 120F for a couple of hours. Using frozen epoxy can cause areas of uncured epoxy as the "epoxy ice" will defrost in the heat generated by the exothermic reaction.

Polishing: You can buff out the E4E-100 ROADRUNNER once it has cured for 7 days. You have 2 options for buffing/polishing the cured epoxy.

1. Use 2000 grit sandpaper (from an auto supply shop) and wet sand the epoxy.
2. You can wet sand the E4E-100 ROADRUNNER and then use a plastic polish to buff it.

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Tips for Success Continued:

Spraying: Do NOT Spray! Our epoxies are not made for spray applications.
Clean-up: We use aerosol carburetor cleaner to clean up spills and messes. We suggest using acetone, toluene, xylene, and lacquer thinner. Avoid regular paint thinner (mineral spirits). To clean hands, use a pumice hand cleaner available in often automotive supply stores.
Thinning: Thinning is not recommended for most applications. There are very few exceptions. The most acceptable use of a thinner is using epoxy to penetrate wood. In this case, no more than 10% is a good amount of thinner to use. Remember, thinners are flammable, so spread the epoxy promptly after thinning to keep the exothermic heat from building up. Use the same thinners listed in the Clean-up section above.
Test: Always make a test to determine the feasibility of your process. There are many unforeseen factors that can affect the outcome of your project. Running a controlled test may be inconvenient, but it can make the "Learning Curve" of processing these products much easier.

Restrictions:

- Do not apply at temperatures below 10 ° C / 50 ° F or above 30 ° C / 86 ° F
- The relative humidity of the surrounding work environment during the application of the coating and throughout the curing process should not exceed 85%
- Substrate temperature must be 3 °C (5.5 °F) above dew point measured
- Humidity content of substrate must be <4% when coating is applied
- Do not apply on porous surfaces where a transfer of humidity may occur during the application
- The application of this coating on an interior or exterior substrate without a moisture barrier is at risk of detachment (by hydrostatic pressure).
- Protect the coating from all sources of moisture for a period of 48 hours
- Surface may discolor in areas exposed to regular ultraviolet light

Health and Safety:

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation. Consult the material safety data sheet for further information.

IMPORTANT NOTICE:

The information and recommendations contained in this document are based on reliable test results according to PPI. The data mentioned are specific to the material indicated. If used in combination with other materials, the results may be different. It is the responsibility of the user to validate the information therein and to test the product before using it. PPI assumes no legal responsibility for the results obtained in such cases. PPI assumes no legal responsibility for any direct, indirect, consequential, economic or any other damages except to replace the product or to reimbursement the purchase price, as set out in the purchase contract.

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