



ZeraKlear™

High Performance Decorative Clear Epoxy Coating

DESCRIPTION

ZeraKlear™ is a two-component, 100% solids, low viscosity clear epoxy coating that provides an attractive, tough and durable finish. ZeraKlear™ is versatile, and can be applied as a smooth or non-slip coating, depending on the customer's requirement. Its exceptionally low odour allows the product to be used in areas where other products cannot be used such as shopping malls, hospitals, restaurants, and etc.

WHERE TO USE

ZeraKlear™ is recommended for use in areas with light to medium duty traffic, particularly decorative applications. ZeraKlear™ is ideal for hospitals, laboratories, retail, shopping malls, locker rooms, washrooms, dealership showrooms, institution buildings, fire stations, garage floors, aircraft hangers, warehouse facilities, storage areas, recreational complexes, studios, auto body and workshops, and etc.

ZeraKlear™ is also well suited for use as a topcoat sealer for concrete countertops. It may also be used for decorative multi-colour epoxy flooring as well as a variety of other decorative applications such as clocks, plaques, and any other interior decorative items that will not be subjected to direct heat.

BENEFITS

- 100% solids, odourless; zero VOC's
- Easy to apply, clean, and maintain.
- Attractive high gloss finish with good gloss retention
- Enhances the appearance of the concrete
- Resistant to staining and yellowing
- Slight ambering even outdoor
- Exceptionally high surface hardness
- Excellent bond to concrete
- Tough, highly durable
- Outstanding water & water spotting resistance

HANDLING PROPERTIES @ 23°C (74°F)

Mixing Ration, by volume	..... 2 parts A: 1 part B
Viscosity (Mixed)	.....600 cps
Solids Content	.....100%

Mixed Weight (Density)	..... 1.1 kg/litre (9.14 lb./US gal)
Pot Life (Working Time)	.....40 mins
Thin Film Set Time	.....12 hours
Foot Traffic	.....16 hours
Vehicular Traffic	..... 24-36 hours
Full Cure & Maximum Resistance	..... 7 days
Hardness (Shore D)	..... 80
Abrasion Resistance	..... 81 mg loss
Taber Abrasion, C-17 Wheel, 1000 cycles	

FLOORING APPLICATION

SURFACE PREPARATION

ZeraKlear™ should be applied over clean, sound, dust-free surfaces. For best results, surface should be prepared as follows.

Existing Epoxy Floor:

Make sure the floor is clean and free from oil or grease. The floor must be sanded with 80-100 grits to provide profile for adhesion. Ensure that the existing floor is sound and adhered well to the concrete. Epoxy coating would not adhere to alkyd or oil based coated floors.

Concrete (New):

Shotblast or equivalent to remove surface laitance, curing compounds or form oils. Concrete should be minimum 28 days old or have 3% or less moisture content. Moisture content can be determined using the test method ASTM D4263.

Concrete (Old):

Remove oil, grease, dirt and any unsound concrete using a combination of commercial de-greasers, alkaline wash, shot blasting or diamond grinding. A combination of acid-etching and power wash can also be used. Cracks and surface defects should be repaired prior to the application of the coating.

CRACK REPAIR

Because of the nature of the product, all floor imperfections will show through the final coating, which makes it critical to have an almost perfect floor prior to the application of

the clear topcoat. If the level of crack repair and imperfections is excessive, we do not recommend using clear epoxy. If the cracks are minimal, use **ZeraBond™** Type 3 clear epoxy gel. Grind the surface after the gel is firmly cured to smooth it for the application of the topcoat.

AREA PREPARATION

For optimal performance, both the coating and substrate should be maintained at 18 to 30°C (68 to 86°F) for 24 hours prior to beginning work. The same temperature range should be maintained during mixing, application, and cure.

Application in direct sunlight and rising surface temperatures may result in blistering of materials due to expansion of entrapped air or moisture in the substrate. Concrete that has been in direct sunlight must be shaded 24 hours prior to application and remain shaded until after the initial set.

OFF-GASSING

The off-gassing is not a by-product of the epoxy coating, but of the displacement of air in the concrete. It depends on the density/PSI (compressive strength of the concrete); the lower the psi and/or water added to the concrete during pouring, the more off-gassing in the concrete. If the concrete is spongy or very porous, it is recommended to apply an epoxy primer first (refer to product data sheet or call Zeraus for recommendations). Alternatively add 2% of ZeraSolv to **ZeraKlear™** to facilitate the penetration, the priming coat must be very thin and be pulled tight with a flat squeegee. If you need to have a thicker film to smooth the concrete, it is recommended, after the first pass, to apply wet on wet within 30 minutes at 8 mils film thickness.

PRIMING

ZeraKlear™ is a self-priming product that requires no primer when the concrete substrate is dry. However, like any other epoxy product on the market, **ZeraKlear™** tends to darken the concrete. **ZeraPrime™** W-48FS provides a lighter colour of concrete as a primer and allows for faster application of topcoat of **ZeraKlear™** in the same day. It is also the best choice for application over fresh 7days old concrete or over damp surfaces. However, if the natural concrete colour is to be

maintained, **ZeraPrime™** W-50UL (or **ZeraTuf™** W-240LC clear slower cure version) waterborne epoxy primer can be used.

APPLICATION

The mixing equipment used to mix the coating must be clean and free of any contaminants that may be present in the equipment from previously used products.

Two coats are recommended (one prime coat and one top coat) The first coat is applied at 4 mils whereas the second coat is applied at 8 mils.

- Pre-mix at low speed component “A” of **ZeraKlear™** first to ensure uniformity. Pour all of the liquid from Part B into a Part A container.
- Mix thoroughly using a slow speed ½ inch drill motor with “jiffy” type blade for two minutes (minimum). Scrape the sides of the container and continue mixing until the coating is uniform.
- Immediately pour all mixed coating onto the edges of the prepared floor and spread the material evenly with a flat squeegee. Use a lint free 6 mm nap roller to back roll the applied material to an even coat. Care should be taken not to over-roll the material as air may become entrapped in the coating.
- Apply the second coat in the same manner as the first (a notched squeegee may be used in the second coat to produce a thicker film).
- If a non-slip sanded surface is required, a properly graded, dry, contaminant free grit should be broadcast on the surface of the top coat and back roll to encapsulate the aggregate onto the coating.
- Allow to cure thoroughly overnight (16 hours) before exposing to foot or light duty traffic. It requires 24-36 hours for vehicular traffic and 7 days for full service. Keep water & detergent away from the floor until fully cured.

Caution: Do not over mix or mix vigorously to avoid bubble formation, leading to a milky finish. Mix slowly and keep the blade deeper (away) from the surface during the mixing.

Matte or Satin Finish:

We recommend using two coats of high scratch resistant clear waterborne urethane coating, **ZeraTuf™** W-102 or

ZeraTuf™ W-104 over the epoxy to control the gloss and produce a very attractive finish. However, these products are recommended for foot traffic decorative applications such as retail stores and shopping malls, restaurants and bars, showrooms, studios, walkways, offices, and etc.

High Gloss Bar & Table Tops:

Acid Etching the Concrete:

If a commercial muriatic acid is used for the purpose, please adhere tightly to the following instructions (use in a well-ventilated area):

- After the surface has been cleaned, dilute the commercial Muriatic Acid with water at one volume of acid and two volumes of water.
- The application rate required (of the diluted acid) is about 500-750 ml/ m² (1.5 pints/10 ft²). Spray apply with a spray bottle to ensure uniformity.
- The acid solution should be worked onto the surface with a hard-bristled brush until complete wetting and coverage is obtained. The acid will react with the concrete surface and will bubble vigorously for a few minutes. During this time, brushing should continue.
- After 10-15 minutes, the bubbling will have subsided and slurry will be left on the surface.
- It is essential to neutralize any possible acid surface conditions, which can impair adhesion. The concrete floor must be neutralized with a diluted solution of TSP and water followed by another thorough rinsing.
- The finished surface should have a “medium sandpaper-like” texture.
- When dry, check the surface with a few drops of water; it should penetrate quickly. If not, re-etch the affected area(s).
- Allow the concrete to dry completely for two-days.

Priming/Sealing Coat:

The porous concrete surface requires a “seal coat” to seal the concrete surface preventing out-gassing (bubble formation). Apply a thin coat of **ZeraKlear™** or alternative waterborne epoxy primer as described earlier. When using waterborne epoxy primer please ensure that the primer is applied at thin film and the milky appearance of the primer turns fully to a clear non-tacky.

Application of Topcoat:

Important Note: Precondition the material to 18-25°C (65-77°F) before using. Failure to do so would lead to a higher viscosity, poor flow/leveling and difficult mixing. Do not over-mix the product to avoid milky foam formation or excessive bubbling.

Apply **ZeraKlear™** evenly with a flexible squeegee. Use a brush for touching up the sides of the difficult-to-reach places. Allow the coating to level; bubbles may rise to the surface. This may be broken with a spike roller (use the metallic type with very thin, needle-like, spikes). Do not disturb the epoxy too close to curing time as it may make permanent defects or marks on the surface. If there is a stubborn bubble, just pop it with a needle. Do not use a hair dryer as it may cause waving damages.

Caution: If a thickness higher than 20 mils is required, apply **ZeraKlear™** in multiple coats to achieve the desired thickness.

LIMITATIONS

- Do not apply **ZeraKlear™** if the substrate and ambient temperature are below 12°C (54°F) or 18°C (65°F) for countertop applications.
- Do not hand-mix **ZeraKlear™**, mechanical-mix only.
- Maximum relative humidity during application and cure is 85%.
- Do not apply to porous surfaces where moisture vapour transmission will occur during application.
- Protect from dampness, condensation and water contact during the initial 24-48-hour cure period.
- Do not apply over damp surfaces unless using the waterborne epoxy primer **ZeraPrime™ W-48FS**.
- Do not use with other standard epoxy primers as it may cause discolouration.
- May slightly discolour upon direct exposure to sunlight.
- It is not recommended for areas subjected to steam cleaning, harsh chemicals, heavy impact or high heat.
- Do not apply the topcoat less than 8 mils as an orange peel finish may appear due to insufficient material to self-level.

- Do not leave mixed material (Part A & B together) in the container for an extended amount of time; it will harden, warm up and smoke.
- It is not recommended for severely damaged floors with excessive repair; do not use dark or coloured repair material (gel) with clear epoxy topcoat.
- Do not use over the existing floor without testing both the inter-coat adhesion as well as the adhesion of the existing floor to the concrete.
- Do not thin the **topcoat** with a solvent of thinner. The prime coat can be extended in certain situations with **ZeraSolv™** up to ½ litre per 11 L unit (add the solvent after thoroughly mixing part A & B together). Ensure that the solvent has exited before applying the second coat.

Inc. shall not be liable for any injury, loss, or damage (direct or consequential) arising from use or inability to use the products. Before using, the user is urged to pre-test the products in his/her own environment to determine the suitability of the products for their intended use, and the user assumes all risk and liability whatsoever in connection therewith.

Zeraus Products Inc.'s liability, if any, is limited to a refund of the purchased price or replacement of that portion of the merchandise proven to be defective. Zeraus Products Inc. shall have no other liability, including liability for incidental, consequential or resultant damages, however caused, whether due to breach of warranty, negligence, or strict liability.

This warranty may not be modified or extended by representatives of Zeraus Products Inc., its distributors or dealers.”

COVERAGE

@ 12 mil dry film thickness:

Prime Coat: (4 mils): 10 m²/litre (400 ft²/U.S. gallon)

Second Coat (8 mils): 5 m²/litre (200 ft²/U.S. gallon)

PACKAGING

3.79 litre (1 U.S. gal.) units

11 litre (2.9 U.S. gal.) kit units

56.7 litre (15 U.S. gal.) units

CLEAN UP

Clean all tools and equipment with xylene prior to the material setting.

SAFETY PRECAUTIONS

Consult the Material Safety Data Sheet (MSDS) for specific instructions.

STORAGE

Store in a heated warehouse. Do not freeze.

SHELL LIFE

Two years from the date of manufacture if kept in the original unopened containers under normal heated warehouse conditions.

WARRANTY

“The recommendations made and the information herein is the result of accurate laboratory and field tests under controlled conditions. We guarantee that the quality and properties of the materials supplied conform to our standards. Zeraus Products Inc. makes no warranties, expressed or implied, as uses and applications are beyond our control. Zeraus Products