



# EpoKlear™

## High Performance Clear Epoxy Coating

### DESCRIPTION

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

### WHERE TO USE

**EpoKlear™** is recommended for use in areas with light to medium duty traffic. **EpoKlear™** 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, etc.

**EpoKlear™** 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
- Very low viscosity
- Easy to apply
- Crystal clear highly gloss finish
- Enhances the appearance of the concrete
- Resistant to staining; very light ambering
- Excellent gloss and gloss retention
- Excellent bond to concrete
- Outstanding water and moisture resistance
- Excellent wear and water spotting resistance
- Can be applied up to 20 mils (½ mm) film thickness per coat
- Easily cleaned and maintained

### Handling and Curing Properties @ 23°C (74°F)

Mixing Ratio, by volume	2 parts A: 1 part B
Viscosity (Mixed)	450 cps
Solids Content	100 %
Mixed Weight (Density)	1.1 kg/litre (9.14 lb./US gal)
Pot Life (working time)	40 minutes
Thin Film Set Time	12 hours
Foot Traffic	16 hours

Vehicular Traffic	24 hours
Full Cure and Maximum Resistance	7 days
Hardness (Shore D)	80
Abrasion Resistance	84 mg loss
Taber Abrasion, C-17 Wheel, 1000 cycles	

### FLOORING APPLICATION:

#### SURFACE PREPARATION

New concrete must be cured for a minimum of 28 days before applying **EpoKlear™**. The substrate must be above 12°C (54°F) and must be dry and free of all dirt, waxes, previously applied coatings, oil, grease, laitance and any foreign matter that may interfere with the bond of the coating to the substrate. Cracks and surface defects should be repaired prior to the application of coating. Concrete surfaces to be coated should be shot blasted or mechanically abraded to provide a clean tooth for 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 **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.

#### PRIMING

**EpoKlear™** is a self-priming product that requires no primer when the concrete substrate is dry. However, like any other epoxy product on the market, **EpoKlear™** tends to darken the concrete. If the natural concrete colour is to be maintained, **Zeraus ZeraPrime™ W-50UL** clear waterborne epoxy primer can be used.. These primers also provide the additional benefit of allowing the primer and topcoat to be

applied in the same day thus saving time and money. (Refer to the

### **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 5 mils whereas the second coat is applied at 10 mils.

- Pre-mix very slowly component “A” of **EpoKlear™** 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 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, Zeraus’ **ZeraTuf™ W-102** 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, 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/ m<sup>2</sup> (1.5 pints/10 ft<sup>2</sup>). Spray apply with a spray bottle to ensure uniformity.
- The acid solution should be worked onto the surface by hard-bristled brush until complete wetting and coverage is obtained. The acid will react with the concrete surface and 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 outgassing (bubble formation). Apply a thin coat of ZeraPrime™ W-50UL using a brush or short nap roller. Ensure that the primer is applied at thin film, and the milky appearance of the primer turns fully to a clear non-tacky. Wait 3-4 hours before proceeding with **EpoKlear™** application.

#### Application of Topcoat:

##### **Important Note:**

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

Apply **EpoKlear™** with a flexible squeegee evenly. Use a brush for touching up the sides of 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 EpoKlear™ in a multiple coats to achieve the desired thickness.**

## LIMITATIONS

- Do not apply **EpoKlear™** if the substrate and ambient temperatures are below 12°C (54°F) or 18°C (65°F) for countertop applications
- Do not hand-mix **EpoKlear™**; 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 waterborne epoxy primer, **ZeraPrime™ W-30FS**.
- Do not use with other standard epoxy primers as it may cause discoloration
- It is not recommended for exterior applications
- It is not recommended for areas subjected to steam cleaning, harsh chemicals or heavy impact
- It is not recommended for areas subjected to 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 leave mixed material (Part A & B together) in the container for an extended amount of time; it will harden and warm up and smoke.
- Do not use over existing floor without testing both the intercoat adhesion as well as the adhesion of the existing floor to concrete
- Do not thin the **topcoat** with solvent or thinner. The prime coat can be extended in certain situations with xylene up to ½ liter per 11L unit (add the solvent after thoroughly mixing part A & B together). Ensure that the solvent has exited before applying the second coat.

### THEORETICAL COVERAGE

@ 15 mil dry film thickness:

Prime Coat: (5 mils): 7.4 m<sup>2</sup>/litre (300 ft<sup>2</sup>/U.S. gallon)

Second Coat (10 mils): 3.9 m<sup>2</sup>/litre (160 ft<sup>2</sup>/U.S. gallon)

## PACKAGING

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

## CLEAN UP

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

## SAFETY PRECAUTION

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

## STORAGE

Store in a heated warehouse. Do not freeze.

## SHELF 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 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.

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9525 - 63 Avenue, Edmonton, Alberta T6E 0G2

Ph: (780) 437-6136 ☎ Fax: (780) 437-5242

# EpoDur™ 100

## High Performance Epoxy Floor Coating

### DESCRIPTION

EpoDur™ 100 is a two-component, low viscosity 100% solids epoxy coating that provides an aesthetically pleasing durable finish for interior concrete floors.

### WHERE TO USE

EpoDur™ 100 is recommended for use in areas with light to medium duty traffic and where there is the possibility of exposure to alkali, mild acids, cleaners and common acids.

### BENEFITS

- 100% solids, with low odour, zero VOC's
- Low viscosity; self-primed, easy to apply in 2-coat application
- Good gloss with an attractive appearance
- Excellent bond to concrete
- Excellent water-spot resistance
- Good wear resistance

### Handling and Curing Properties @ 23°C (74°F)

Mix Ratio, by volume	2 parts A: 1 part B
Viscosity (Mixed)	700 cps
Solids Content	100 %
Mixed Weight (Density)	1.2 kg/litre (10 lb./US gal)
Pot Life	20 minutes
Thin Film Set Time/foot traffic	8-10 hours
Light forklift Traffic	16 hours
Full Cure and Maximum Resistance	7 days
Hardness (Shore D)	80
Tensile Elongation (ASTM D638-86)	10% @ break
Tensile Strength (ASTM D638-86)	20 Mpa (2900 psi)
Hardness (Shore D) (ASTM D2240-86)	80
Impact Resistance (ASTM D2794)	pass 160 in/Ib.
Abrasion Resistance (ASTM D4060) Taber Abrasion, C-17 Wheel, 1000 cycles	89mg loss

### SURFACE PREPARATION

EpoDur™ 100 should be applied over clean, sound, dust free surfaces. For best results, surface should be prepared as follows:

#### Concrete (New):

Shot blasting or equivalent to remove surface laitence, 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 test method ASTM D4263.

#### Concrete (Old):

Remove oil, grease, dirt and any unsound concrete using a combination of commercial degreasers, 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 coating.

#### Steel:

Remove greases, oils and contaminants from surfaces and sandblast to white metals.

### 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 of EpoDur™ 100. The first coat is applied at 5 mils whereas the second coat is applied at 10-12 mils. The priming coat MUST be dry and firm before applying the second coat to prevent film defects (e.g fish eyes).

- Pre-mix component "A" of EpoDur™ 100 first to eliminate the possibility of settlement. 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 colour is uniform.
- Immediately pour all mixed coating onto the edges of prepared floor and spread the material evenly with a flat squeegee. Using a lint free 6 mm nap roller back roll the applied material to provide 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 hours for vehicular traffic and 7 days for full service. Keep water & detergent away from the floor until fully cured.

#### LIMITATIONS

- Do not apply **EpoDur™ 100** if the substrate and ambient temperatures are below 10°C (50°F)
- Do not apply the topcoat less than 10 mils as an orange peel finish may appear or bubbling may occur 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 and warm up and smoke.
- Not recommended for areas subjected to steam cleaning , harsh chemicals or heavy impact
- Do not use over existing floor without testing both the intercoat adhesion as well as the adhesion of the existing floor to concrete
- Not recommended as a water-proofing coating in suspended boiler rooms or commercial parking garages
- Do not apply in areas where the humidity is greater than 85%
- May discolor under direct constant exposure to UV, and due to some chemical exposures
- Do not use on slab-on-grade without vapour barrier

#### THEORETICAL COVERAGE

Neat: 15 mil dry film thickness:

Prime Coat: (5 mils): 7.4 m<sup>2</sup>/litre (300 f<sup>2</sup>/U.S. gallon)

Second Coat (10 mils): 3.9 m<sup>2</sup>/litre (160 f<sup>2</sup>/U.S. gallon)

#### PACKAGING

56.7 litre/15 U.S. gal. units

#### CLEAN UP

Clean all equipment and installation tools immediately with xylene.

#### SAFETY PRECAUTION

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

#### STORAGE

Store in a heated warehouse. Do not freeze.

#### SHELF LIFE

1 year from the date of manufacture if kept in original unopened containers

#### WARRANTY

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