

ZeraDur™ 94

High Solids Epoxy Floor Coating

DESCRIPTION

ZeraDur™ 94 is an attractive tough low odour durable high-solids two-component epoxy coating. It offers a unique combination of ease of application, attractive appearance and high bond strength to concrete.

WHERE TO USE

ZeraDur™ 94 is recommended for use in areas with light to medium duty traffic. ZeraDur™ 94 is ideal for warehouse facilities, storage areas, garage floors, shower areas, locker rooms, schools, sidewalks, maintenance rooms, recreational facilities, stairs, workshops, etc.

BENEFITS

- Self-priming
- Ample pot life (working time) for ease of application
- Excellent penetration and adhesion to concrete
- Low odour, high solids; VOC's compliance
- Contains no xylene or hazardous air pollutant (HAP) solvents
- **No induction time is required; just mix and apply**
- An aesthetic high gloss seamless coating
- A non-slip additive can be added directly to the can during mixing, producing more a uniform finish
- Excellent toughness and durability
- Available in grey, tan and tile red; other colours may be made subject to minimum order and extended delivery time

Handling Properties @ 23°C (74°F)

Mixing Ratio, by volume	4 parts A: 1 part B
Viscosity (Mixed)	600 cps
Solids Content, by volume	93 %
by weight	95 %
Mixed Weight (Density)	1.3 kg/litre (10.8 lb./US gal)
Pot Life (working time)	120 minutes
Minimum Application Temperature	10°C (50°F)
Thin Film Set Time	16 hours
Foot Traffic (re-coat)	24 hours
Vehicular/ Forklift Traffic	72 hours
Full Cure and Maximum Resistance	7 days

DATA - Cured Film 7days cured@ 23°C (74°F)/50%RH

Pull Out Tensile Adhesion to concrete (ASTM D4541)	>500 psi (concrete failure)
Adhesion to ZeraPrime™ WB. (ASTM D4541)	>500 psi (concrete failure)
Intercoat Adhesion to itself. (ASTM D4541)	>500 psi (concrete failure)
Abrasion Resistance (ASTM D4060)	80 mg loss
Taber Abrasion, C-17 Wheel, 1000 cycles	

SURFACE PREPARATION

New concrete must be cured for a minimum of 28 days before applying ZeraDur™ 94. The substrate must be above 12°C (54°F) and must be dry, 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. The most effective way for preparation of the floor is to use a shot-blasting technique, or another means of mechanical abrasion to ensure a thorough and deep profile for adhesion. Alternatively, an acid-etching technique can be used, providing care is taken regarding the safe handling of the acid and avoiding contamination of the adjacent surfaces. If acid etching is the method of choice for preparation of the concrete surface, the etched surface must be thoroughly flushed, neutralized and dried prior to application of the coating (see procedures below).

Removing Oil & Grease:

- Pour a quality commercial degreaser or Trisodium Phosphate (TSP) on the stain. Let the detergent sit for 45 minutes, then pour boiling water on the area and vigorously scrub the stain section with the broom.
- Conduct the “water test”; mist water over the stain and if the water beads, repeat the same treatment again.

Removing Painted Surfaces:

- Latex paints, oil-based paints or sealers must be removed using grinding or other mechanical means. Over a sound old epoxy coating, the surface must be sanded to ensure good adhesion.

Acid Etching the Concrete:

This method is only acceptable for new clean concrete flooring. It is never recommended for concrete flooring that was cured with a concrete curing compound or has old paint or a sealer.

Please adhere tightly to the following instructions:

- Dilute the commercial muriatic acid with water at one volume acid and two volumes of water
- The application rate required (of the diluted acid) is about 500 ml/m² (1 pint/10 ft²); do not allow acid solution to form pools on the floor
- Spread the solution evenly using a broom over the entire floor
- The acid solution should be worked onto the surface by hard-bristled brooms until complete wetting and coverage is obtained. The acid will react with the concrete surface (for 5 minutes) and bubble vigorously for a few minutes. During this time, brushing should continue.
- Before rinsing look for areas where bubbling did not occur. These areas may require further application of acid solution
- After 10-15 minutes, the bubbling will have subsided (acid solution has stopped foaming) and slurry will be left on the surface. Power wash the floor area (or use a garden hose) with clean water. Do not allow the floor to dry prior to rinsing as salts formed by the acid reacting with the concrete will cause adhesion problems
- It is essential to neutralize the acid-etched surface to prevent poor adhesion. While the floor is still wet, apply a solution of 3% TSP in water at approximately 100 ft²/US gallon (2.4 m³/l). Scrub into floor; allow to stand for 5 minutes and powerwash with clean water
- The finished surface should have a “medium sandpaper-like” texture
- Finally squeegee and mop floor of all free standing water
- Allow the concrete to dry completely for 2 days before using epoxy primer/coating over etched concrete.

Repairing the Cracks (if applicable):

- First thing in the morning, after the floor has dried out, fill 1/4 in. cracks and larger holes or spalled areas with **ZeraBond™** Type 3 or 4 (epoxy crack filler). Use a plastic putty knife or triangle wide spatula to scrape the surface level and smooth. Let this dry for 8-12 hours before you begin applying the coating

- Most large area concrete floors have joints and seams, which allow for movement and expansion. Do not fill these cracks with epoxy, but rather with an elastomeric joint filler such as **ZeraJoint™** EU.

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.

APPLICATION

ZeraDur™ 94 is applied in a 2-coat application.

The first coat (priming coat) is applied at 4-5 mils (one gallon per 400 sq.ft) whereas the second coat (topcoat) is applied at 8-10 mils (one gallon per 200 sq.ft).

CAUTION: You must precondition the material @23C (74F) for 24 hours prior to the application to prevent problems of higher viscosity (thicker material) and slow curing during the winter or very fast setting during the summer.

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.

- premix component “A” of **ZeraDur™** 94 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 drill equipped with a mixing blade for one minute until the color is uniform. If a non-slip finish is required, add the non-slip additive (purchased separately, 450gm bag per 5gallon unit) into the mixed material and disperse for at least another two minutes. Make sure to scrape the side into the coating.
- Immediately pour some of the mixed material onto the edges of prepared floor and spread the material evenly with a flat squeegee (and notch squeegee for topcoat). 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.

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.

- Apply the second coat in the same manner as the first
- if a smoother finish is needed, do not use “non-slip additive”. Otherwise follow the same procedures described above.
- allow the topcoat to cure thoroughly for 24 hours @ 23C/74F for foot traffic, and 3 days for forklift traffic. It takes 7 days to achieve a full cure. Keep water, cleaners and other liquid spillage away from the coating for at least one week.

Disclaimer: Although **ZeraDur 94** can be made non-slip using the above described technique, floors may become slippery under certain conditions. Therefore, it is your own responsibility to determine the level and type of slip resistance that suits your specific needs. We recommend the use of additional slip-resistant aggregates in your floor if it will be exposed to wet, icy or oily conditions.

LIMITATIONS

- Do not apply **ZeraDur™ 94** if the substrate and ambient temperatures are below 18°C (68°F)
- Do not apply on untreated floors; the concrete must be prepared by shot-blasting or an equivalent technique, or acid etched for proper adhesion.
- Do not apply **ZeraDur™ 94** on tacky primer; the primer coat must be dry
- Not recommended for exterior applications
- Not recommended for areas subject to steam cleaning
- Slow curing product; requires 3 days of curing time @ 23C (74F) for forklift or vehicular traffic
- Do not subject the coating to water, cleaners or chemicals for 7 days after the application.
- For a non-slip finish, do not apply the coating heavily (over an 8 mils film thickness), otherwise the finish will not be non-slip
- Outgassing may occur from time to time due to poor quality of concrete; apply at least two thin coats (4-5 mils) of **ZeraDur™ 94** to seal the concrete from outgassing; a third coat may be necessary in some cases to produce the desired smooth finish
- Do not use over existing floor without testing both the intercoat adhesion as well as the adhesion of the existing floor to concrete
- Although the product is low odour (ether-like), it is not recommended for kitchen areas, food processing

areas, hospitals or other environments where solvent-based products are not permitted.

- The product has a slight “orange peel” finish if applied in a thin film

COVERAGE

200-250 ft²/U.S. gallon, depending on the film thickness applied and porosity of the concrete.

PACKAGING

18.9 litre/ 5 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.

SHELF LIFE

Two years from the date of manufacture if kept in 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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