



POOL AND DECK COATINGS

Kelley Technical Coatings



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ALL OLYMPIC PRODUCTS ARE VOC COMPLIANT

Bulletin No. 105, pgs 1 & 2 of 4

ZERON and POXOLON 2 on Uncoated Concrete, Sandblasted Concrete and Plaster Pool Surfaces

The information in this bulletin will apply only to new or old uncoated concrete pools and new or old plaster finish pools. For the coating to replace plastering on new gunite pools please refer to Bulletin No. 100, *Zeron as an Alternative to Plaster*. For recoating previously coated pools, please refer to Bulletin No. 119, *The Application of Olympic Pool Coatings on Previously Coated Pools*.

hosed off under pressure. After drying the surface should be perfect for application of primer and coating.

Sandblasted concrete surfaces need to be acid etched; and they should be tri-sodium phosphate washed and hosed off to remove grit and dust.

CONCRETE POOL SURFACE PREPARATION

PLASTER SURFACE PREPARATION

The surface condition of concrete is a factor in the adhesion capacity of any coating applied to it. Therefore, strong and reliable bonds can only be achieved on clean, sound and strong concrete surfaces. **PLEASE READ CAREFULLY!**

On older plaster surfaces, all algae, calcium, iron and other residual debris should be removed. First wash with a tri-sodium phosphate solution to remove scum such as suntan oil. Remember, these substances tend to concentrate at the water line, so be very thorough in this area.

NEW CONCRETE SURFACE

Then, acid etch the surface with muriatic acid solution of about 10%. In addition to etching the surface, this process should remove most stains. After acid etching, it is necessary once again to wash with a tri-sodium phosphate solution to neutralize the acid, then hose off with water.

The surface of new concrete is always the weakest portion of the concrete slab. When laying slab, vibration and troweling will encourage the rise to surface of the lighter components such as cement, water and fine sand. This is called "laitance". Epoxies, when applied over the laitance, will soon lose adhesion, as the laitance is not firmly bonded to the slab. The laitance is approximately 1/16" (2 millimeters) thick and must be removed. In addition, other non-compatible residues such as invisible curing compounds are present and require removal.

CAUTION! After several days of rain or a prolonged rainy spell, the concrete and the soil surrounding the pool become saturated with water. As the concrete absorbs the ground water, it is being evaporated from the surface of the pool. As long as this rapid transmission of moisture (toward the pool surface) is in progress, the prime coat will not penetrate and secure a good bond. This entrapped water could develop future blistering. While our epoxy coatings will bond to a damp surface, they will not bond to a surface where excess moisture prevents penetration of the primer. When this saturated concrete condition prevails, the pool should be allowed to dry out for 2 to 4 days before coating. Moisture Test: Laying plastic on the surface will trap moisture and form condensation showing if surface is still damp.

For removal, and to provide a satisfactory surface for adherence, acid etching is required. (For detailed instructions see Bulletin No. 141, *Acid Etching Concrete Surfaces*.) After the surface has been cleaned and etched with muriatic acid, it should be scrubbed with tri-sodium phosphate to remove and neutralize any remaining acid residue. Then, hose off with clean water. After drying, the pool is ready for coating.

OLD UNCOATED SURFACE

THE PRIME COAT ON BARE CONCRETE

An old uncoated concrete pool should be washed with a solution of No. 910 POOL WASHING COMPOUND on tri-sodium phosphate to remove scum, suntan oil and similar residue. This is particularly true at the water line, where these substances are concentrated. The tri-sodium phosphate should then be hosed off and the pool acid etched. Then to neutralize the acid the pool should be washed again with tri-sodium phosphate solution and

On a smooth or fairly smooth surface prime with No. 214 POXOPRIME II. A rough surface should be primed with No. 216 GUNZITE.

Over a well etched surface, apply a first or prime coat of the appropriate primer. In addition to providing good adhesion, the primer also seals in water soluble salts, hydrates, and other undesirable elements which could migrate to the surface.

One can contains the base portion and must be thoroughly mixed with the catalyst at the ratio of one part of catalyst to each 3 parts of base. After the catalyst has been added and thoroughly mixed, follow ageing period on label.

Apply the primer on an etched surface with a roller or by spraying. Primers are best applied with a roller equipped with a 7/16" (1.2 centimeters) roller cover. Covers must have a solvent resistant core. It also could be brushed on the surface. On concrete block, use POXOPRIME II on fairly smooth surfaces. When the surface is rough, use No. 216 GUNZITE PRIMER.

Do not apply epoxy primers on cold walls. The pool surface should feel warm to the touch before the primer is applied. Avoid application when dew is on the surface. Wait until the dew evaporates from the surface, or dry off with rags. Apply epoxy primers according to label. Apply liberally. If the surface is porous and soaking up the primer, a second coat should be applied, as you should have a solid uniform coat. Clean application equipment according to label.

By using the correct epoxy primer on new or old uncoated and etched concrete pool surfaces, you should eliminate the possibility of future blistering, flaking, or peeling resulting from the factors mentioned previously or from poor adhesion. While you may be using POXOLON 2 or ZERON continuously and with excellent results without the use of a primer, the primer is certainly insurance to secure the best possible results.

THE PRIME COAT ON PLASTER

If the plaster surface is smooth, No. 214 POXOPRIME II is applied in the same fashion as described above for a concrete surface with the following minor clarification.

When used on plastered surfaces, it should be liberally applied with a roller equipped with a 1/2" nap roller cover. When the plaster has excessive porosity, the surface will require a second or third coat of POXOPRIME II. POXOPRIME II should provide a coat which both seals and uniformly covers the plaster. If the plaster is not thoroughly sealed, future blistering or excessive chalking could result.

On rough plaster use No. 216 GUNZITE.

APPLICATION OF POXOLON 2 OR ZERON ON CONCRETE AND PLASTER

POXOLON 2 or ZERON must be applied according to directions if you are to expect optimum results. Both POXOLON 2 and ZERON have good adhesion over POXOPRIME II or GUNZITE Primer. The best temperature for application is 70°F to 95°F (21.1°C to 35°C). If there is dew, rain, or water on the surface, it should be permitted to dry out.

You can apply POXOLON 2 or ZERON by rolling or spraying. When rolling, use a roller equipped with a 1/2" nap lambswool cover. The core must be solvent resistant. Roll out of a 1/3 to 1/2 filled 5 gallon can equipped with a can grid to roll off excess coating. When spraying, use either an airless or conventional spray outfit. Airless spraying is faster and does a better job. Regular spraying, which atomizes the coating, requires covering of decks and other objects near

spraying, as the mist is inclined to be air-borne.

(A) THOROUGHLY stir in the catalyst. This is very important. All containers are only 3/4 full to leave room for the catalyst which is added at the ratio of one part catalyst to each three parts of base.

(B) Never apply epoxy coatings when the temperature is below 50°F (10°C). Below this temperature, they are static and do not cure or harden. When there is a considerable drop in the temperature at night, the following day the pool walls remain much colder than the air temperature. The surface SHOULD be 60°F (15.6°C), or above to achieve optimum results. Never apply these coatings to uncoated concrete or plastered surfaces which have not been previously etched with muriatic acid and primed with POXOPRIME II or GUNZITE PRIMER. Two coats of POXOLON 2 or one coat of ZERON are necessary over POXOPRIME II or GUNZITE PRIMER.

(C) When mixing the base with the catalyst on residential and smaller pools, do not mix more than 2 one gallon (3.86 liters) containers at a time. This will prevent the mixture from "setting up" before it is used. Five gallon (18.93 liters) containers "set up" faster and should only be used on larger pools where the materials are sprayed or being applied at a faster rate.

PLEASE NOTE: Do not apply too long between coats. Waiting too long before applying succeeding coats can result in peeling. When the existing coat cures too hard, it is not longer solvent sensitive. The solvent in the next coat will not "bite" into the previous coat. Consult the recoating schedule. A good test for the application of the second or third coat is to press your fingers on the coated surface. If it is still tacky, wait until the tack is gone before applying the succeeding coat or filling the pool. When succeeding coats are applied while the underlying coat is tacky, this underlying coat will soften and never fully harden. After the pool is filled, peeling could result within 3 days.

MISCELLANEOUS

RACING LINES - POXOLON 2 in Black or Viking Blue should be used over POXOLON 2 or ZERON. These lines should be applied as soon as the surface is hard enough to walk on without marring the finish. Masking tape should be used in order to produce straight lines. If the waiting period between the finish coat and the application of the lines is too long, the underlying coat will no longer be solvent sensitive. Then the solvent in the succeeding coat for the lines will not "bite" into the underlying epoxy coating. When it is necessary to wait too long for the application of the lines, then the surface where the lines are to be applied must be scarified by dragging coarse sandpaper (which will cut fine lines) parallel with the lines in the area to be coated.

When using epoxy coatings the application equipment should be cleaned by the No. 1109 Solvent immediately after application. Once it cures it is almost impossible to remove.

While the ZERON or POXOLON 2 is still tacky, white silica sand should be lightly sifted on the bottom of wading pools, steps and shallow areas. After the coating "sets up", the excess sand should be brushed or vacuumed from the surface. Avoid using too much sand. A very light concentration will make the surface slip-proof.



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If the coating covers well, adheres well, and looks well in one place and does not in another place, there is still nothing wrong with the coating. It is the surface to which it is applied that deserves your careful inspection. Does the coating show up dull in one spot and glossy in another? It is the concrete surface again that is causing the trouble. The dull portions indicate that the surface is softer and more porous at those points and consequently absorbs more of the gloss producing resin. Another application is the proper remedy.

When the roller or brush leaves lap marks and streaks, and the coating is lighter in spots, this is either due to the softness or porosity of the surface, or not thoroughly stirring the POXOLON 2 or ZERON from the bottom of the container. The next coat should remedy this condition. If it does not, then the pool will need an additional coat.

NOTE: It is very important to stir blue shades of POXOLON 2 or ZERON VERY THOROUGHLY.

Blue pigments are more difficult to disperse. Always mix the coating in the center of the floor of the pool. Coat the pool walls first and the floor last. Coat the last section nearest the ladder where you will climb out. Never wear hard soled shoes when painting. Wear sneakers or soft soled shoes, particularly when painting racing lines.

Avoid painting in the direct rays of the sun on real hot days. Paint on the shady side when the day is hot. **CAUTION!** The first coat of POXOLON 2 over POXOPRIME II and the second coat of POXOLON 2, or the one coat of ZERON **MUST BE** applied over the underlying coat within two days.

PLEASE NOTE! A pool coated with either epoxy coating should not be repainted until it becomes so thin in spots that it is almost transparent. Epoxies erode very mildly each year. After 5 to 8 years, it erodes down until it is thin and dull. This provides the perfect surface to repaint. When repainting, wash with No. 910 POOL WASHING COMPOUND or tri-sodium, acid clean, and TSP again. The pool is ready for another paint job. When a color is used it is advisable to acid clean the chalk from the surface each year. This also removes stains and other residue. This brings back the normal uniform color. White should also be acid cleaned every 2 to 3 years. Use a mild 10% acid solution for cleaning, and then hose off. Consult our Bulletin No. 119 for recoating with POXOLON 2 or ZERON.

PHYSICAL DATA

SOLVENT:

No. 1109 for GUNZITE PRIMER, POXOLON 2 and ZERON
Flash Point above 105°F (40.6°C)

Recoating time for the application of the first coat of POXOLON 2 or the only coat of ZERON over POXOPRIME II or GUNZITE PRIMER, and the second coat of POXOLON 2 over the first.

MINIMUM:

POXOLON 2 or ZERON on POXOPRIME II and GUNZITE PRIMER
4 hours @ 90°F to 95°F
5 hours @ 85°F to 90°F
6 hours @ 80°F to 85°F
8 hours @ 75°F to 80°F

MAXIMUM:

48 hours

POT LIFE:

POXOPRIME II

2 - 4 hours depending on temperature
POXOLON 2 and GUNZITE PRIMER
2 hours @ 90°F to 95°F (32.2°C to 35°C)
3 hours @ 85°F to 90°F (29.4°C to 32.2°C)
4 hours @ 75°F to 85°F (23.9°C to 29.4°C)
6 hours @ 68°F to 75°F (20°C to 23.9°C)
8 hours @ 60°F to 68°F (15.6°C to 20°C)

ZERON

1/2 hour @ 85°F (29.4°C) or above
1 hour @ 65°F to 85°F (18.3°C to 29.4°C)

NOTE! Pot life and working time can be increased by thinning 5% to 10% with No. 1109 SOLVENT. Highly recommended when surface temperatures exceed 90°F. Water should be used with POXOPRIME II.

NOTE! ZERON Only – Above 85°F (29.4°C) use immediately after mixing thoroughly with catalyst. Do not mix 5 gallon (18.93 liters) containers unless you can use within 30 to 40 minutes. The smaller the quantity mixed at one time, the longer the pot life. ALWAYS STORE AND MIX IN A COOL PLACE.

CURING SCHEDULE: before filling pool

POXOLON 2 AND ZERON

3 days @ 75°F and up (23.9°C)

4 days @ 70°F to 75°F (21.1°C to 23.9°C)

5 days @ 65°F to 70°F (18.3°C to 21.1°C)

6 days @ 60°F to 65°F (15.6°C to 18.3°C)

Results may be improved by waiting a day or two longer.

SQUARE FEET PER GALLON:

ZERON

Smooth Surface: 150 sq. ft (14 sq meters) per gallon

Textured Surface: 125 sq. ft (12 sq. meters) per gallon

POXOLON 2

Smooth Surface:

1st coat - 250 sq. ft. (23 sq. meters) per gal.

2nd coat - 300 sq. ft. (28 sq. meters) per gal.

POXOPRIME II

Smooth Surface:

200 to 250 sq. ft. (19 to 23 sq. meters)

GUNZITE PRIMER

Rough, Sandblasted, or Fiberglass Surface:

100 to 150 sq. ft. (10 to 14 sq. meters) per gallon

Note: When coating large pools, do not mix more than 5 gallons at one time. If it takes 45 minutes to use 5 gallons, mix another 5 gallons every 45 minutes, etc. Be sure to time your mixing schedule to allow proper "ageing" period after mixing.

CAN STABILITY:

All products - 2 years or over

AGEING PERIOD:

After mixing and before application for:

ZERON - GUNZITE PRIMER - POXOLON 2

When temperature is 50°F - 75°F: 30 minutes

When temperature is 75°F - 85°F: 15 minutes

APPLIED FILM THICKNESS:

GUNZITE PRIMER: 10 to 14 mils

ZERON: 10 to 12 mils (one coat)

POXOPRIME: 2 1/2 to 3 1/2 mils (one coat)

POXOLON 2: 5 to 7 mils (two coats)

CAUTION! Keep away from heat and open flame. Avoid prolonged contact with skin and breathing of vapor. Close container after each use. Areas of body or clothing on contact with uncured resin and/or catalyst should be thoroughly cleaned with solvent and washed with soap and water immediately. Use only where there is adequate ventilation. KEEP OUT OF THE REACH OF CHILDREN.

WARNING!

If you scrape or remove old paint, you may release lead dust. **LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.** Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at **1-800-424-LEAD** or log on to **www.epa.gov/lead**

Information herein given has been accumulated through many years of experience and verified by our technical personnel and is based upon tests believed to be reliable, but RESULTS ARE NOT GUARANTEED.

NOTE: KELLEY TECHNICAL COATINGS, INC. makes no implied warranty of merchantability, no implied warranty of fitness for a particular purpose and no other warranty, either express or implied, concerning its products.

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