PETRA WATERBASED EPOXY 1:4

advanced coating systems

TWO COMPONENT DEEP PENETRATING EPOXY

GENERAL PRODUCT DESCRIPTION

Petra W/B (water based) Epoxy is a two component, high performance water reducable epoxy that tightly bonds and seals concrete with a chemical and abrasion resistant finish. The product is great for economically sealing concrete floors from chemicals and stains and for eliminating dusting. Petra W/B Epoxy is user friendly, offering long pot life, and no water clean up. The low viscosity coating penetrates and bites into properly prepared concrete to form a bond that is stronger than concrete, Petra W/B Epoxy is also alkali resistant and moisture tolerant.

Advantages:

- Essentially oderless
- Self-priming
- 98g/L
- Easy to apply, long pot life
- Will not soften or re-emulsify in water
- Does not support biological growth
- May be applied over damp concrete
- Easy clean up with soap and water
- Alkali resistant to pH 14
- Can be applied over ten day old concrete

PACKAGING

Petra Waterbased Epoxy is available in two different kit sizes:

	Part A	Part B
5 Gallon Kit	1 gal.	4 gal.
1.25 Gallon Kit	1 qt.	1 gal.

PHYSICAL PROPERTIES

PROPERTY	VALUE	REFERENCE
Bond to Concrete	350 psi concrete fails at this point	ASTM D 4541
Taber Abrasion	70-75 Mgs.	ASTM D 4060 CS 17 Wheels
Flammability	Self-extinguishing	ASTM D 635
Pencil Hardness	2 H	ASTM D 3363
Flash Point	>200°F	ASTM D 93
Gloss	98.	ASTM D 523

COLORS

Petra Waterbased Epoxy is available in white and gray. Other colors may be made available on a special request basis.

APPLICATIONS

Petra W/B Epoxy is easy to apply and may be used in the following applications:

- Warehouse Floors
- Food Preparation
- Hangars
- Restrooms
- Garages
- Manufacturing
- Aisle ways
- Clean rooms
- Automotive showrooms
- Schools
- Laboratories

PRODUCT DATA

Volumetric Ratio:	1 to 4
Solids:	50% (+ or - 1%)
Coverage:	300-400 S/F per gal. per coat
	150-200 S/F per gal. at 4-5 mils (2 coats)
Application Temperature:	55-90°F
Thinning:	May add up to 25% water
Pot Life:	4 Hours @ 75°F
Working time on floor:	15-30 minutes @ 75°F
Cure Time:	10-12 hours (walking) @ 75°F
	24 hours (traffic) @ 75°F
Critical recoat time:	24 hours @ 75°F
Shelf life:	12 months
USDA Food and Beverage:	Meets requirements

CONCRETE PREPARATION

Before the coating is applied, the concrete must be:
Clean-- Contaminants removed
Profiled-- Surface etched
Sound--Cracks repaired

Mechanical preparation is the preferred method of preparing concrete for coating application. Shot-blasting, diamond grinding, scarifying, and scabbling are all acceptable methods. The concrete profile should be approximately 40-60 grit sandpaper after preparation.

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PATCHING

Voids, cracks, and imperfections will be seen in finished coating if the concrete is not patched correctly. Patch concrete with Petra Patch. After the patching material has cured, diamond grind patch the concrete. If a non-Petra patching material is used, make sure that it is a two-part epoxy patch. Always test unproven products by applying patch material first, then Petra coating system next. Check to see if bonding is firm.

MIXING

The mix ratio of Petra W/B Epoxy(1:4) is 1 A to 4 B. Due to the coatings extended pot life, the entire premeasured kit may be mixed at one time for application. Mix the following with a drill and jiffy mixer.

1. Pre-mix the Part B until uniform. Part A does not require pre-mixing. Pour 4 parts of the part B into a mixing bucket and then add 1 part of part A to the mixing bucket.
2. Mix the combined material for two minutes.
3. Allow to chemically react for 20 minutes. You may then add up to 25% clean, cool tap water to the mixed material and mix again for one minute. Petra W/B Epoxy(1:4) is now ready to apply. Petra W/B Epoxy(1:4) has a pot life of up to 6 hours. Once poured out on the floor, 15-20 minutes of working time can be expected.

PRODUCT LIMITATION

Ground level concrete slabs emit moisture vapor. The allowable moisture emissions for concrete is 3 lbs. / 1000 S/F over a twenty-four hour period. If moisture is above this level, then blistering and delamination of coating may occur. A calcium chloride test should be performed to determine concrete moisture level. If moisture levels exceed the 3 lb. limit, a concrete moisture vapor control system should be used first before applying coating system. Please contact Petra technical department for approved systems.

Coating systems are susceptible to cracking if the concrete moves or separates below the coating. Hence, joint and crack treatment should be reviewed prior to coating application. As a general rule, control joints (saw cuts) and random cracks should be saw cut or chased first then filled with Petra Patch or similar approved hard epoxy product. Construction joints (two slabs which meet and hence move) should be treated. After the coating has been applied and cured, saw cut through the coating over construction joints.

APPLICATION PROCESS

Petra W/B Epoxy is typically applied in two or more thin coats. For estimation, use 200 S/F (4 mils) to 150 S/F (5 mils) as a coverage rate. The following is for a two coat system:

1. Always apply in descending temperatures. Concrete is porous and traps air. Ascending temperatures (generally mornings), can cause out gassing in the concrete. It is safer to apply coatings in the late afternoon, especially for exterior applications. Optimum ambient temperature should be between 65-90°F and at least 5° above the dew point during application.
2. In very hot and dry conditions, pre-wetting the concrete with a pump up sprayer will help with application. Apply only enough water to darken the concrete but not leave any standing water (damp dry).
3. Apply approximately 300-350 S/F per gallon by immediately pouring out on surface in a ribbon or small puddles.
4. Using a 3/8" non-shedding phenolic (plastic) core paint roller, roll coating forwards and backwards. Do not allow puddles in low spots, cracks and divots. Brush out excess material.
5. Pull resin fairly tight while completely wetting out concrete and uniformly covering the surface. Keep a wet edge and as soon as the coating is uniform on the floor leave it alone and do not go back to touch up.
6. After the first coat is cured enough to walk on (8-24 hrs.), apply a second coat in the opposite direction from step 5. by repeating steps 1-5. The coverage will be higher as the first coat primarily seals most of the concrete. Additional coats may be added to improve gloss and build film thckness.

CLEANUP

Petra Waterbased Epoxy while in a liquid state may be cleaned up with water and degreaser. Otherwise a strong solvent like acetone may be required while the epoxy is setting up.

WARRANTY

Petra Industrial Polymers products are warranted for one year after date of application. Please refer to the Petra Industrial Polymer's Limited Material Warranty for additional clarification.

SAFETY

Consult Petra Waterbased Epoxy material safety data sheet. Avoid Petra Waterbased Epoxy RC contact with eyes and skin. Some individuals may be allergic to epoxy. Protective gloves and clothing are recommended.

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