



Product Information

PLATINUM EP-12/EP-4

High Build Epoxy Primers

Description

PLATINUM'S EP-12 is a two component, 100% solids, low viscosity, moisture tolerant, fast drying, high strength, and multi-purpose epoxy primer. When applied PLATINUM'S EP-12 is an 8-10 hour cure and the PLATINUM'S EP-4 is a 4-hour cure.

Uses

PLATINUM'S EP-12 epoxy primer is used to prime concrete, metal and wood as well as many other existing coatings. It is an excellent all around concrete primer/sealer. PLATINUM'S EP-12 may be used as an epoxy mortar when combined with 2 to 5 parts of oven-dried aggregate.

Advantages

- Meets USDA criteria
- 100% Solids
- Low Viscosity
- Chemical Resistant
- High Build
- Moisture Tolerant
- Convenient 2:1 Mix; A:B=2:1
- High Strength
- Superior Adhesion

Coverage

PLATINUM'S EP-12 covers up to 300 sq.ft. per gallon under normal conditions, which will achieve 5.2 dry mils. PLATINUM'S EP-12 may be applied at a heavier rate to achieve a higher build system or to accommodate the broadcasting of aggregates.

Colors

Available clear and pigmented.

Packaging

- 1 1/2 gallon kits
(1 gallon part A to 1/2 gallon part B)
- 15 gallon kits
(10 gallons part A to 5 gallons part B)

Inspection

Concrete must be clean, dry, and free of grease, paint, oil, dust, curing agents, or any foreign material that will prevent proper adhesion. The concrete should be at least 2500 psi and feel like 30-grit sandpaper. The

concrete should be porous and be able to absorb water. A minimum of 28 days cured is required on all concrete. Relative humidity in the concrete floor slab should be below 80% (per ASTM F-2170).

Before starting flooring work, test existing concrete slab to make sure there is no efflorescence or high levels of alkalinity. Alkalinity refers to a high pH reading which means the floor is not neutral. A high alkaline environment can cause salts to creep up through the cement called efflorescence. These salts have a tendency to prevent or destroy the bonding of coatings to the concrete. The most common form of testing is the use of a wide-range pH paper or tape. Make sure the floors pH reading ranges between 5-9 to ensure adhesion. The testing of concrete for alkalinity can show the amount of alkalinity only at the time the test is ran, and cannot be used to predict long-term conditions.

Calcium chloride tests should be conducted to determine if the concrete is sufficiently dry for an epoxy flooring installation. The calcium chloride tests should be conducted in accordance with the latest edition of ASTM F 1869, *Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride*. When running a calcium chloride test, it is important to remove any grease, oil, curing agents, etc. so accurate readings can be obtained. A rate of 4.5lbs/1000 ft²/24hr period or less is an acceptable amount of vapor pressure for an epoxy flooring installation. If the reading ranges from 4.5lbs to 15lbs, a moisture barrier system such as our PLATINUM'S Vapor Barrier can be installed to reduce the emissions.

Failing to adhere to these strict guidelines can result in product delamination, discoloration, blistering, or all together failure of the coating system. Testing is the responsibility of the applicator. Platinum Coatings bears no responsibility for failures due to any of the above conditions.

Surface Preparation

Over Concrete Surfaces: Shotblasting is the preferred method for preparing the concrete. In some cases you may prepare by acid etching, floor scrubbing with a nylogrit brush and waterblasting to achieve a clean and uniform surface that feels like 50 grit sandpaper.

If acid etching is done, be sure to properly etch and then adequately neutralize by scrubbing and rinsing several times followed by power washing. Prepare the surface so that the product will soak in and properly bond.

Over existing Epoxy: Sand the surface with a floor buffer and 50 grit sand paper, remove debris and wipe with denatured alcohol just before new application.

Mixing

As a primer: Mix 2 parts A with 1 part B (by volume) of PLATINUM'S EP-12 (or fast drying EP-4) together for 3 to 4 minutes. For best penetration into concrete, thin by adding up to 1 quart of acetone to each 1.5 gallon kit. Thinned material must be applied at less than 5 mils (and not puddle) to cure properly. The PLATINUM'S EP-12 will have approximately 30 minutes of working time while the PLATINUM'S EP-4 will have 15-20 minutes working time.

As an epoxy mortar: Mix two parts A with 1 part B (by volume) for 3 to 4 minutes and do not thin.

Application

As a primer: Immediately after mixing, spread a strip of the batch onto the surface along the edges where it will be cut in using a brush. Pour the remaining material near the cut in area and spread evenly using a trowel or squeegee and back roll using a 1/4" nap non-shedding roller. Thinned material must be applied at less than 5 mils (and not puddled) to cure properly.

As a mortar: Prime the surface using the methods described above. Mix part A & B of epoxy then combine 2 to 5 parts of oven-dried aggregate. *Spread, gage rake and trowel into place* the prepared epoxy mortar using a trowel. In order to smooth and level the mortar, clean the trowel with a solvent as you go.

As an intermediate coat: Mix and apply without solvent at the desired thickness using a notched trowel or squeegee and backroll. The addition of silica flour or silica sand will add body and help to build up more cost effectively.

Drying Time

You may re-coat as soon as the surface is dry to touch or in about 8 hours (but not later than 48 hours). *EP-4 should dry in 4 hours.* Light foot traffic may be permitted in 12 hours, light vehicle traffic in 48 hours, heavy traffic in 7 days. All times are based on average temperature of 70 degrees and 50% humidity. Cooler temperatures will increase drying time.

Limitations

- Do not apply at temperatures below 50°F or above 90°F.
- After mixing completely (3-4 minutes remove from mixing container an apply to floor)
- Do not apply over concrete with Moisture Vapor Emissions above 4.5lbs/1000 ft²/24hr period.
- For interior use only unless protected by an UV resistant coating.
- Concrete must be cured for a minimum of 28 days.
- Solvents added to thin such as acetone will make product combustible or flammable in which case be aware of sparks or open flame.
- If solvent is added, the products must be applied thinly to allow the solvent to escape or proper curing will to occur.

Clean Up

Uncured material can be removed with a solvent. Cured material can only be removed mechanically.

Technical Data for Standard EP-12

Chemical Composition	Modified Bisphenol, Modified Amidoamine
Viscosity	1600-1800 cps
Gel Time	90 @77°F (150 mass/mins.)
Tensile Strength	7550 psi
Tensile Elongation	5.3%
Shore D Hardness	83
Abrasion Resistance @1000 cycles Wt Loss, (gms)	0.036
Mar Resistance, KG	1.3
Pencil Hardness	3H
Impact Resistance, inch-lbs Direct/Reverse	15/2
<u>Glass Transition Temperature</u>	<u>48°C</u>
Thin Film Set Time	7 hrs. @70°F
Flexural Strength	11,185 psi
Flexural Modulus	445,000 psi
Compressive Modulus	375,000 psi
Compressive Strength @ yield	11,355 psi
Cross Hatch Adhesion (0-Worst, 5-Best)	5
Pot life	40 minutes (8oz. (250g) at 77°F
VOC	0 g/l