

4100 Moisture Blocking Epoxy Primer Installation Guide

PRODUCT DESCRIPTION

Versatile's 4100 Moisture Blocking Primer/Sealer is a 100% solids epoxy clear sealer that is designed to wick deep into the concrete, providing incredible adhesion to the concrete floor. It is designed for use over concrete to mitigate moisture vapor emissions and increase adhesion of subsequently applied systems to concrete. 4100 develops strong bond strength to concrete floor surfaces, even under cool, wet or damp conditions. 4100 is typically used as a primer for Versatile's Solid X® commercial and industrial flooring systems including High Build Epoxy, Epoxy Slurry, Epoxy Mortar, Urethane Cement and other two component floor coating systems. 4100 can prevent failure of moisture vapor emissions up to 15lbs over a 24-hours period. It may also be used as a vapor reduction and odor barrier beneath carpet, VCT, and ceramic tile. 4100 can also be used to produce slurries and mortars for patching and repairing substrates or as a standalone sealer over concrete floor surfaces.

MIX RATIO

2A:1B

* Sold in 1.5-Gallon Kit or 15-Gallon Bulk Kit

RECOMMENDED COVERAGE RATES

Over Surfaces

Concrete

First Coat

200 SF/gal

Second Coat

250 SF/gal

* Coverage Rates will be dependent upon surface profile.

SUBSTRATE REQUIREMENTS

Concrete

All concrete shall be clean and bare. Concrete shall be structurally sound and stable. Concrete shall be free of dust, dirt, grease, contamination, surface laitance, and other potential bond-breaking substances that could impair adhesion. All cracks, gouges, and other surface defects need to be addressed prior to coating installation. Substrate and ambient temperatures must be above 35°F during installation of coating. Relative humidity should not exceed 65% during installation of the coating. Environmental conditions must not be near the dew point during installation of the coating. Moisture Vapor Transmission of the substrate must not exceed 15lbs per 1000 SF per 24 hours. For high MVT substrates, consult with a Versatile representative for recommendations.

Other Substrates

Consult with a Versatile representative for recommendations over other substrates.

ADVICE BEFORE INSTALLATION

Mixing

4100 is a 2-component product, be sure to mix thoroughly before the application. Cure times will be affected by environmental conditions. Do not force dry. High humidity and/or low temperatures can cause haziness and blushing in the coating. Large masses of mixed and/or heated material will have a shorter pot-life. If you are not familiar with the product, Do Not Mix more than 1.5 gallons at a time. The more you mix, the shorter your pot life (working time) will be.

Thinning -

Advantages of thinning 4100 are a lower viscosity which makes it easier to roll and an extended pot-life. 4100 can be thinned with up to a ½ pint of Xylene or Acetone. However, this will slow the cure times.

* Caution: Thinning with Xylene will increase the VOC of 4100 over 50g/L, which makes it non-compliant for residential use in the SCAQMD District. Check your local district rules before using Xylene, otherwise use Acetone. Solvents are extremely flammable, be sure that all containers are metal, and all sources of ignition have been turned off. Using optional 41 Accelerator will shorten the pot-life. Be careful of not mixing a large amount if you are not familiar with the product.

Hot Weather Tips

4100 has a shorter pot life in very hot conditions. Keep the material core temperature around 50-75°F if possible. Icing the buckets hours before doing job or placing in a cool environment the day before application can help by lowering the core temperature.

Cold Weather Tips

4100 and all Epoxies are temperature sensitive. The colder the temperature, the longer the dry and cure time will be extended. Adding solvents to the product will also increase the dry times. This product may have higher viscosity or may gel up in very cold conditions. Keep the material core temperature around 50-75°F if possible. Using a pail warmer hours before doing the job or

4100 Moisture Blocking Epoxy Primer Installation Guide

placing product in a warm environment the day before application can help increase the core temperature which will make the material thinner and easier to work with.

***Optional 41 Accelerator**

- 1 pack of 41 Accelerator per 1.5 gallons of 4100 will provide up to 30 mins pot-life and 4 hrs dry-time at 75°F.
- 2 packs of 41 Accelerator per 1.5 gallons of 4100 will provide up to 20 mins pot-life and 2 hrs dry-time 75°F.

Please note that when the pot-life kicks, it will be fast and become unusable very quickly. It is recommended to mix a small amount of material first for cutting in, etc. until you become more familiar with the system performance in your local climate.

INSTALLATION STEPS

1. Surface Preparation

There are many methods of surface preparation for various substrates, many of which are adequate for this application. Consult a Versatile Representative for alternatives to the procedure outlined below, and methods of correcting problematic and contaminated substrates.

Concrete -

Pour water onto the concrete surface. Inspect area to see if water penetrates concrete (concrete will darken). If the concrete allows water to penetrate and not “bead up” on the surface, then proceed to clean the surface using V-100 concrete cleaner degreaser. Use liberal amounts on oils stains, then scrub until the water no longer beads on stain. If water does “bead up” when doing the penetration test, then the following additional preparation will be needed. Concrete must be mechanically profiled and prepared by shot-blasting, grinding, water-jetting, or other means of scarification to produce a Concrete Surface Profile (CSP) between #2 and #4, according to International Concrete Repair Institute (ICRI) Guideline No. 03732.

2. Preparation

- Shut off all sources of ignition prior to work, and throughout the coating process.
- Supply auxiliary ventilation as necessary to produce a safe working environment.
- Use a NIOSH approved respirator capable of filtering organic vapors.
- Always wear protective clothing, gloves, and equipment as required by OSHA and as necessary.
- Use a brush and 18” Lint Free 3/8” Nap roller for application.

3. Mixing

- Material should be kept at room temperature (50-75°F)
- Use a jiffy-type mixing blade at a minimum of 400 rpm
- First, premix 4100 Epoxy A-component for 1 minute using a jiffy-type mixing blade
- Then mix 4100 Epoxy A-Component with 4100 Epoxy B-Component at ratios listed on the label for 2-3 minutes. Slowly add the **optional** 41 accelerators as you mix.
- Transfer mixed material to a second mixing vessel and mix an additional minute to ensure that material along the sides of the first mixing vessel have been properly incorporated into the mixture. Be sure to mix thoroughly.
- 4100 has a pot-life of 45 minutes, this is based on 1.5-gal mass at normal temperature at 75° F. Adding accelerators will decrease pot-life.

4. Application

- Working only as much product as you can handle properly whilst keeping a wet edge.
- Begin by cutting-in the concrete footings (Stem Walls) and around the edges with a 3”-4” chip brush or 6” weenie roller.
- Do not work edges more than 15-20 minutes ahead of the main body of the floor. Keep a wet edge.
- Pour a band of the mixed material across the floor surface

4100 Moisture Blocking Epoxy Primer Installation Guide

- Use 1/16" squeegee to spread the material out evenly so the entire surface is coated evenly.
- Walk back into the wet floor on spiked shoes to disperse any heavy puddles of materials that are pooling. Keep a firm pressure when spreading.
- Then use a 3/8"-1/2" nap 18" wide roller to back roll the entire surface, keeping the spread rate at 200SF/gal.
- Allow the 4100 to cure a minimum of 6-8 hours (standard) or 2-4 hours (accelerated) before repeating the procedure for second coat within 8-24 hours (standard) or 6-12 hours (accelerated).
- If more than 24 hours has passed, then sand and scuff the floor to de-gloss before proceeding to a 2nd coat or additional Topcoats.

** Note: 1 Coat installations can be achieved, however due to the wicking nature of this product it may not have uniform build and hide with one coat. 2 coats are recommended to achieve uniform build and hide.*

5. Clean-up

- Immediately cleanup splatter marks and tools with MEK or Acetone. Clean hands and exposed skin with mild soap and water, and/or citrus based hand cleaner.

6. Cure Times

- 4100 can typically accept light foot traffic in 6 hours (accelerated) or 12 hours (standard), vehicular traffic with pneumatic tires in 72 hours.
- Full cure occurs in 7 days.

ADDITIONAL CAUTIONS AND RECOMENDATIONS

- If concrete is extremely porous, a 2nd coat of the 4100 may necessary to hold the Flake.
- Use an 18-inch non-lint roller to help speed the application and uniformity of material.
- Do not allow material to puddle.
- Mask all areas that need protection.
- Use accelerators when installing in cold climates or where the return to service time needs to be fast tracked.
- Do not force dry.
- Store material at 50-75°F
- Always wear protective clothing, gloves and equipment as required by OSHA and as necessary.
- Turn off all sources of ignition and follow safety guidelines listed in product sections.
- Have all personnel who come in contact with liquids read The Versatile EPOXY, URETHANE, AND POLYASPARTIC 2K SAFETY GUIDE and Material Safety Data Sheets before commencing work.

TECHNICAL SERVICES

- Technical services can be obtained by contacting Versatile directly at 714-829-2600.