



## CreteDefender P2 Application Instructions

PLEASE READ THE INSTRUCTIONS IN THEIR ENTIRETY BEFORE APPLYING CreteDefender P2.

Failure to follow instructions could result in damage to you or your property.

### SAFETY PRECAUTIONS:

- Wear protective clothing.
- Avoid contact with skin or eyes.
- Do not ingest. If ingested, drink plenty of water and at least 16 ounces of milk if available. Seek immediate medical attention. Do not induce vomiting.
- If using indoors, a vapor rated respirator is recommended in areas without good ventilation.
- If contacted with skin, wash thoroughly with soap and water.
- If contacted with eyes, flush immediately with a steady stream of water for 15 minutes. Seek medical attention.

### APPLICATION PRECAUTIONS

- DO NOT contact CreteDefender P2 with glass. It will permanently etch glass.
- DO NOT contact CreteDefender P2 with Aluminum. Flammable hydrogen gas can be generated.
- If CreteDefender P2 contacts glass or aluminum, flush the surface IMMEDIATELY with water from a garden hose for at least 3-5 minutes followed by cleaning with a sponge saturated in soapy water. Rinse soap off after cleaning. If water gets on the concrete you are treating, you will need to halt application in that area, allow the concrete to completely dry (at least 6 hours) and re-apply CreteDefender P2.
- Do not get CreteDefender P2 on painted surfaces. If painted surfaces are exposed to CreteDefender P2, flush them immediately with water (you may use a wet cloth to wipe CreteDefender P2 off of painted surfaces). Do not let CreteDefender P2 dry on painted surfaces.
- Do not apply on a windy day, as the spray could carry onto glass or aluminum surfaces quite a distance from your immediate work area.
- CreteDefender P2 is not subject to special handling defined under United States Environmental Protection Agency Regulations.
- Do not re-use the container unless it has been professionally cleaned.

DO NOT DILUTE this product. It is mixed at the plant and ready to use.

Refer to the SDS for additional spill, safety, and handling information.

## **TOOLS YOU WILL NEED:**

- A garden sprayer (NON-Aluminum with no aluminum parts), 3/4” nap roller cover and roller, or a larger spray rig. (Give us a call and we will talk you through your options.)
- A stiff broom or deck brush
- Latex, nitrile, or rubber gloves
- Rubber boots (recommended, but an old pair of sneakers will be fine)
- Safety glasses or a face shield
- Long pants and a long sleeved shirt
- A squeegee, if applying to an interior, smooth machine trowel-finished floor

## **PREPARATION:**

Prior to application:

1. Remove all debris from the concrete to be treated. Be sure to remove all mud, moss, leaves, dirt, and other debris from the concrete. Scrape off chewing gum and other substances hardened on the concrete surface. Use a degreaser to remove petroleum stains.
2. Wash the concrete if dirt, mud, or other substances are on it. If the concrete is more than 6 months old, pressure wash it to aid in opening the pores of the concrete to allow CreteDefender P2 to penetrate more effectively.
3. If the concrete is covered with grime or a film from prolonged exposure to weather or various chemicals that slows water penetration into the substrate, acid wash the concrete with a mixture of 4:1 water to muriatic acid ratio, or comparable solution.

Prior to application, all previous coatings, paint, curing compounds, cure and seal products, water repellants, or any other sealer or chemical that has been previously applied to the concrete must be removed. Removal of any of these items must be performed in order to allow CreteDefender P2 to react with the concrete. Failure to remove any previous coating, paint, sealer, water repellent, curing compound, or cure and seal products will prevent proper application of CreteDefender P2 and will void any CreteDefender P2 warranty. Please refer to the manufacturer of the product that has previously been applied for removal instructions. To be clear, ANY product previously applied to the concrete **MUST** be removed prior to application of CreteDefender P2.

New concrete that has no curing compound or sealer previously applied needs no preparation, but it must be cured enough so that you do not leave a mark on it when walking (usually at least 24 hours after placement). Concrete can still be “green,” i.e. not fully cured.

Place all tools and containers of CreteDefender P2 in an easily accessible area.

## **APPLICATION**

### **General Instructions**

Determine the amount of CreteDefender P2 needed for the project. CreteDefender P2 is generally applied at a rate of 100 to 200 square feet per gallon (2.5 – 5 square meters/liter). Weather conditions and your concrete will dictate how much you need. The more porous your concrete is, the more CreteDefender P2 it will require. Some concrete will need more, or less, depending on its porosity.

In estimating, a good rule of thumb is to apply 1 gallon per application for each 125 square feet on exterior concrete (3 square meters/liter). At least **2 applications are required for all exterior concrete**, and all concrete (inside or out) exposed to heavy amounts of salts. The 2nd application

will generally use less CreteDefender P2 than the first. You will need to keep the concrete saturated with CreteDefender P2 for 20 minutes during each application, and any puddles or standing material MUST BE REMOVED after 20-30 minutes. Bear in mind that some concrete will need more than 2 applications due to its porosity or extreme exposure to salt. For ordering purposes, order 1 gallon of CreteDefender P2 for every 62.5 square feet of concrete (1 liter for every 1.5 square meters).

**You are NOT painting or coating. You are stimulating a chemical reaction in the concrete and you should apply CreteDefender P2 in saturating applications. Once the concrete can absorb no more, you are done. In good quality exterior concrete, this USUALLY happens with 2 applications. Coverage rates are guidelines, designed to limit product waste. The amount you use will depend on concrete porosity and weather conditions.**

Concrete MUST be dry in order to apply CreteDefender P2. DO NOT APPLY CreteDefender P2 if the concrete is wet or damp, or if rain is possible in the 24 hours after application is complete.

CreteDefender P2 MUST be applied when the temperature is above 38 degrees Fahrenheit (4 degrees Celsius), and freezing temperatures are not expected within 24 hours of application. DO NOT apply CreteDefender P2 in temperatures above 90 degrees Fahrenheit (32 degrees Celsius) for exterior concrete or 100 degrees Fahrenheit (38 degrees Celsius) for interior concrete. Generally, you will get better coverage when applied out of direct sunlight and in cool temperatures (50-70 degrees Fahrenheit - 10-21 degrees Celsius). Early morning is the best time to apply.

If you have questions, or need assistance with application, please call CreteDefender, Inc., in the United States at (877) 830-6008. Outside the United States or Canada, call 00-1-423-329-6420.

### **Instructions for exterior concrete:**

#### **Sprayer Instructions:**

- Pour CreteDefender P2 into a plastic or epoxy-coated garden sprayer or a larger spray rig. Contact us and we'll let you know your options for larger rigs. (DO NOT use an aluminum sprayer!). Pressurize the sprayer and spray CreteDefender P2 onto the concrete, saturating the surface. The surface must remain saturated for 20 minutes. If the surface dries in less than 20 minutes, re-apply as needed to keep the concrete wet.
- After 20 - 30 minutes, use a stiff broom, squeegee, or deck brush to remove any puddles. (If puddles are left to dry, a hard, white crystalline substance will remain where the puddle was. You will need to pressure wash this to remove it using a 3000psi or greater pressure washer.)
- Allow the concrete to dry completely (at least 6 hours.)
- Keep water off the surface of the concrete for at least 24 hours after each application. If rain occurs within 24 hours, you may need to re-apply.
- After the concrete has dried completely (a minimum of 6 hours), perform a 2nd application of CreteDefender P2 in the manner described above. If you wish to wait a day or more between applications, that is acceptable, so long as you observe the temperature and weather considerations listed.

## **Roller Instructions:**

(Note: This is a more labor-intensive application process, and will likely require an additional person to assist you in the application.)

You will need a ¾-inch roller cover for application, if using a paint roller.

- Pour CreteDefender P2 either directly onto the concrete, or into a plastic paint tray. Roll or squeegee out CreteDefender P2 to saturate the surface. Do not use sparingly. Use at least 1 gallon for every 125 square feet (1 liter per meter). Make sure you cover the entire surface of the concrete. The surface must remain wet for 20 minutes. If dry spots occur, roll or squeegee more CreteDefender P2 on the dry area.
- If you are using a roller, please be careful since the roller will “spray” CreteDefender P2 a long distance, depending on how quickly you are rolling. Be careful not to get this spray onto glass or aluminum.
- After 20 minutes, use a stiff broom, squeegee, or deck brush to remove any puddles. Allow the concrete to dry completely (at least 6 hours).
- No water is allowed on the surface of the concrete for at least 24 hours after each application. If rain occurs within 24 hours, you may need to re-apply.
- After the concrete has dried completely (a minimum of 6 hours), perform a 2nd application of CreteDefender P2 in the manner described above. If you wish to wait a day between applications, that is acceptable, so long as you observe the temperature and weather considerations listed.

## **Clean-up:**

After completing the application, wash all tools thoroughly with soap and water and allow them to dry. Make sure you do not get water on the treated concrete for at least 24 hours after application. Dispose of any roller covers, latex or nitrile gloves. Remove your shoes and allow them to dry before wearing them inside. Launder your clothes normally.

## **Instructions for Interior application:**

(Note: the instructions for interior application are designed for machine troweled concrete or concrete that has previously been polished with at least 200 grit. If your interior concrete is broom finished or hand trowel finished, follow the instructions for exterior concrete, which require 2 applications. For Salt Storage facilities or other facilities where regular chemical or salt contact is anticipated, a minimum of 3 applications is required, regardless of the finish of the concrete. More may be necessary. Please contact Cretedefender, Inc. to discuss your specific project.)

Determine the amount of CreteDefender P2 you will need. For polished or machine troweled concrete, one application at a rate of 175 square feet per gallon (4.3 square meters/liter) is a good estimate. Only one application will be needed, unless concrete is regularly exposed to chemicals or salt.

Concrete **MUST** be dry in order to apply CreteDefender P2. **DO NOT APPLY** CreteDefender P2 if the concrete is wet or damp, or if water is to contact the treated area in the 24 hours after application is complete.

CreteDefender P2 MUST be applied when the temperature of the area to be treated is above 38 degrees Fahrenheit (4 degrees Celsius), and freezing temperatures are not expected within 24 hours of application. DO NOT apply CreteDefender P2 for interior applications in temperatures above 100 degrees Fahrenheit (38 degrees Celsius).

### Steps for Interior Application:

- **Apply P2:**
  - Treat individual sections of the floor, from expansion joint to expansion joint.
  - Pour CreteDefender P2 into a plastic or epoxy-coated garden sprayer or larger spray rig. Call us and we'll let you know your options. (DO NOT use an aluminum sprayer!).
  - Pressurize the sprayer and spray CreteDefender P2 onto the concrete, saturating the surface until it is close to beginning to puddle, with enough P2 product for you to move it around with a scrubber or broom.
  - You may also apply by pouring directly onto the concrete and spreading with a squeegee.
- **Agitate the surface:** For interior applications, agitation is required to allow for the penetration of the product into the concrete. This agitation may be done with either a stiff broom or floor scrubber with a stiff bristle attachment (like those used to wash floors).
  - When you have saturated the concrete with CreteDefender P2, agitate the surface.
    - If using a **scrubbing machine:** A floor cleaning machine, or floor scrubber, may be of the type you sit in or may be one you push. With either type, it should have brushes on the front and a vacuum and squeegee on the back. As you agitate the P2, turn off the vacuum and raise the squeegee. The brushes should be in contact with the concrete and pushing the P2 around. Go back and forth over the section being treated until the floor begins to get slippery.
    - If using a **broom:** Walk back and forth over the area being treated, pushing the P2 back and forth over the concrete until the floor begins to get slippery.
  - Agitate the surface until it reaches the point of getting a “gel” feel. This process typically takes from 15-40 minutes. The warmer the air temperature and concrete, the faster it will react. You can tell you've reached that point because the floor will become slippery. You will also start to see footprints.
  - The surface must remain saturated until the floor exhibits the “gel” feel.
    - If any part of the surface dries in before you reach the point of getting the gel feel, re-apply P2 as needed to keep the concrete wet.
    - If any P2 gums on the surface, add some water or additional P2 as needed to keep the concrete wet.
- **Remove excess P2:**
  - During the agitation process, use the scrubbing machine, or a broom or squeegee to push any puddles around until the product is absorbed.
  - When the P2 begins to gel, be sure to remove the excess so it does not crystallize.
    - If using a **scrubbing machine:** Raise the brushes. Lower the squeegee and turn on the vacuum. Drive over the treated area to suck off excess P2. Remove any lingering excess that the machine does not get up with a standard mop.
    - If using a **broom:** Use a squeegee to remove excess P2. Pull the squeegee toward you, in order to not leave wet footprints. Suck up the excess with a shop vac or towels. Remove any lingering excess P2 with a standard mop.

- If excess is left to dry, a hard, white crystalline substance will remain where the puddle was. You will need to pressure wash this to remove it using a 3000psi or greater pressure washer or a burnishing machine or concrete floor grinder. If you do see a white residue, your concrete is still protected. The residue is simply a cosmetic issue.
- Repeat the above steps with each section to be treated.
- Allow the concrete to dry completely (at least 6 hours) before floor or vehicle traffic.
- Keep water off the surface of the concrete for at least 24 hours.

Again-- you are not painting or coating. You are stimulating a chemical reaction in the concrete. In interior applications, this reaction is stimulated by agitation at the surface. The slippery feel created by this agitation is the indicator that the reaction is occurring.

### **Clean-up:**

After completing the application, wash all tools thoroughly with soap and water and allow them to dry. Rinse out the scrubbing machine with water. Make sure you do not get water on the treated concrete for at least 24 hours after application. Dispose of any roller covers, latex or nitrile gloves. Remove your shoes and allow them to dry before wearing them inside your house. Launder your clothes normally.

### **Applying P2 as a cure:**

P2 can be applied to the concrete once it is possible to walk across the surface without leaving any imprint. Spray or roll a consistent amount, applying enough product to saturate the surface without any puddling. Broom the product into the surface, spreading it evenly. Keep the surface wet for 20 minutes. If any areas begin to dry before 20 minutes have elapsed, apply more product. Ideally a three-man crew would be used to apply—one spraying the initial product, one brooming it in, and another spot spraying as it dries.

Allow the product to dry for at least 6 hours before applying a second coat, in the same manner as the first coat. Much less product will be used for a second coat.