



CeramycGuard™ Black Diamond Mixing and Installation Instructions

Concrete Preparation

Concrete must be free of all foreign or unsound materials, including organic coatings, paints, oils, residues, dirt, dust, debris, or any other bond breakers.

Concrete should be prepared to a minimum CSP 1-2, to enhance bonding and remove any existing surface contamination.

For restoration or repair projects, concrete profile and means of mechanical preparation should be determined based project requirements and the state of existing substrate.

If you have questions, please see Technical Data Sheet, or consult with a Zirconia technical representative.

Concrete Cleaning

Goal: Concrete surface must be clean, with no dust, debris, or contamination of any kind prior to coating application.

1. Clean substrate of all previous coatings, sealants, oil residues, or other contaminants. Any organic products used for crack repair must be excavated.
2. Remove all loose debris or loosely attached aggregate. Best practice is to use a **Surface Cleaner** spinning pressure washing head during pressure washing to ensure all debris and chemicals are removed (top right image).

If colloidal application was performed, then concrete can be lightly pressure washed, or auto scrubbed to remove dust, soils, and any other contaminants from construction activity.

Mixing and Application Instructions

Mixing:

1. Gather appropriately sized plastic pails for mixing CeramycGuard.
2. Prepare drill with mixing bit securely attached. Operate drill at MAX RPM ONLY.
3. *Read steps 4-10 before opening or mixing any material.*
4. Take Part A and pour the entire contents into mixing pail. If mixing multiple gallons at once, pour in Part A of every gallon.
5. Cut off corner of Part B bag, and begin slowly pouring contents into mixing pail, taking care to pour no more than 1/2 of bag at once prior to mixing with the drill until mixed. If mixing multiple gallons, do not mix more than 3 gallons at once. When mixing 2 gallons, pour no more than one bag of Part B at once. When mixing 3 gallons, pour no more than two bags of Part B at once. Always make sure all powder is fully incorporated, with no lumps or clumping, prior to adding any additional powder.
6. Using a drill at max RPM, continuously mix as the Part B powder is added to Part A solution. For every ¼ bag poured, material must be mixed until fully integrated and no lumps remain.
7. Once all material is mixed with no lumps, continue to mix for at least 60 seconds or until fully integrated.
8. Add entire contents of the Black Diamond bag into mixing pail. If mixing multiple gallons at once, pour in Black Diamond for each gallon into mixing pail.
9. Using drill at MAX RPM, mix for an additional 60 seconds, or until all contents are integrated.

10. Add entire contents of the Part C solution into mixing pail. If mixing multiple gallons at once, pour in Part C of each gallon into mixing pail.
11. Using drill at MAX RPM, mix for an additional 60 seconds, integrating this solution. Some black material may float and congregate at surface while mixing, this is normal.
12. Pot life once mixed: Approximately 1 hour when ambient temperature is 70 °F (21 °C) and humidity is at 50% RH.

Application:

1. Verify that ambient and substrate temperatures are between 55°F-85°F, and relative humidity is between 30%-85%.
2. Verify cleanliness of substrate prior to application of any mixed CeramycGuard.
3. Using drill at max RPM, quickly remix CeramycGuard just prior to application.
4. Using recommended roller cover, flat brush, or bristle brush cut in perimeter areas as necessary, prior to coating of main section.
5. Using recommended roller cover or flat brush, apply CeramycGuard over intended surface until a thickness of 6-8 mil has been built up (10 mil maximum). Coverage rates will vary depending on porosity of substrate. Some areas may quickly build up the necessary thickness while other areas may require more material.
*For HORIZONTAL SURFACES, a squeegee and back-roll method may be used to quickly distribute and even out material.
6. Shoe spikes must be worn if coated areas need to be traversed before initial cure (hardening) of material.
7. Protect CeramycGuard from water for a minimum of 24 hours. Keep coated areas free of foot traffic and equipment until fully cured.
8. Monitor temperature and humidity during cure time to be sure of proper curing conditions. We advise the use of a HOBO air temperature and humidity meter or similar for this purpose.