

Technical Data Sheet

QuickTime™ and a
decompressor
are needed to see this picture.

1. PRODUCT NAME *CreteDefender™*

High Performance Water Based Non-Toxic Chemical Treatment that hardens, strengthens, stabilizes, protects, increases the mass & density and extends the useful life of concrete structures.

2. PRODUCT DESCRIPTION

A colorless, non-toxic chemical that penetrates the concrete permeable zones producing an insoluble by-product that directly encapsulates the cementitious properties of concrete, greatly reducing the porosity, increasing the surface hardness, and protecting the concrete from attack by liquids, acids, salts and other contaminants.

PROTECTING CONCRETE

This process produces a reactive by-product that fills the gel pores, shrinkage cracks and alligator cracks of the concrete. The by-product can reach depths of over 4 inches into the concrete, making the concrete extremely resistant to water and contaminant penetration. The process allows the concrete to breathe while still giving excellent protection. This process keeps the alkaline content (pH) high, and in cases where deteriorated concrete is being treated, actually raises the pH of the concrete thereby stabilizing and in some cases reversing the deterioration. This process should be used prior to concrete repair, because of its ability to raise the pH of existing deteriorated concrete.

HARDENING

Because *CreteDefender™* produces a reactive and solid by-product in the concrete, it increases the mass and density thereby making the surface harder and increasing the compression strength. Lab test have shown up to 45% increase in hardness of treated samples with *CreteDefender™* vs. non-treated samples.

3. USES

CreteDefender's™ primary use is for protecting new and existing dense concrete structures such as Commercial Floors, Parking Facilities, Bridges, Loading Ramps, Driveways, Walkways, Roads, Runways, Taxiways and any concrete structure. *CreteDefender* can increase the useful life of normal concrete up to 40%. *CreteDefender™* is designed for normal, dense high strength concrete and is not effective on brick, porous concrete blocks, or similar types of concrete products.

4. TECHNICAL DATA

TEMPERATURE LIMITS:

CreteDefender™ can be applied in temperatures as low as 38° F and as high as 95° F. Do not allow the surface to freeze for at least 24 hours after the final application.

DRYING TIME: Normal drying-time is about 2 to 4 hours depending on the temperature and humidity. The surface must be completely dry prior to applying *CreteDefender™*.

PAINTING / COATINGS: The surface can be painted or coatings can be applied 24 hours after the surface has completely dried. However, it is recommended that you wash off the surface with fresh water and let thoroughly dry before painting lines or anything else on the surface.

INTERNAL COMPOSITION: A proprietary blend of reactive silicates and surfactants. Non-Toxic. Non-flammable. Non-Hazardous. NO special handling requirements under environmental regulations.

CAUTIONS: *CreteDefender™* is high in alkaline content. Wear protective clothing, gloves, and

eye protection. Make sure there is adequate ventilation. See MSDS, product label or installation instruction booklet for complete safety details.

DO NOT apply or splash on glass or painted surfaces. Protect decorative door fronts as this product may stain them. If you do splash on these surfaces, clean with fresh water immediately. **DO NOT** store in aluminum containers or use aluminum spraying equipment. **CLEAN UP** equipment with soap and water as soon as possible after use. **CAUTION** - leaving residue in spraying equipment may damage equipment.

MIXING: *CreteDefender*[™] is a clear liquid and comes pre mixed. **DO NOT** dilute.

COLOR: *CreteDefender*[™] is clear and does not change the color of concrete. **NOTE:** Occasionally, a slight brown tint may appear on the surface of the concrete after the final application. This is due to iron being present in the concrete. This will wash / wear off in time.

PACKAGING: 55-Gallon drums and 5-Gallon buckets / bulk shipments available.

COVERAGE: The average coverage for fully cured brushed finished concrete will range between 100 to 125 square feet per gallon per application. Two applications are necessary on these types of concrete surfaces. The coverage for commercial steel troweled concrete floors should be between 125 and 150 square feet per gallon, and generally only one application is necessary.

ANTICIPATED TREATMENT RESULTS: *CreteDefender*[™] can produce the following results.

- Reduce the porosity of existing concrete by up to 90%.
- Increase the surface hardness in existing concrete by up to 45% (ASTM C-779)
- Increase compression strength in deteriorated concrete.
- Practically eliminate chloride penetration.
- Inhibit chemical attack of treated concrete.
- Form a gelling to a solid by-product in the micro-cracks, gel pours and alligator cracks in the concrete to the depth of penetration.
- Retard scaling of high strength concrete.
- Meets ASTM C-672 (Waterproofing)
- Raise the pH of deteriorated concrete
- Reduces water absorption by up to 98% as results of ASTM C-642

5. INSTALLATION

METHOD OF APPLICATION:

Simply pour, pump or spray the formula from the container or pumping system.

TOOLS NEEDED: Low pressure sprayers, brooms, safety equipment and protective gear.

Mechanical Scrubbers

SURFACE PREPARATION: The surface of the concrete must be clean and free of foreign material, such as grease and coatings that would prevent *CreteDefender*[™] from penetrating into the concrete. Thoroughly clean dirty areas. **DO NOT ACID WASH CONCRETE.** Concrete must be completely dry before application of the formula can begin on fully cured surfaces.

IMPLEMENTATION: Pre-determine the amount of formula (gallons) that will be needed to complete the project.

A) Application on NEW steel troweled surfaces. *CreteDefender*[™] is applied in **ONE** application (**except where specified differently**) at a rate of 125 to 150 square feet per gallon. On new floors the formula can be installed as soon as possible after the finish troweling operation after the surface is hard enough to walk on without marking. Simply saturate the surface with the formula, keeping the entire surface wet for at least 20 minutes. Keep moving the formula around the floor with bristle brooms or mechanical scrubbers until the formula starts to react and becomes slippery under foot, approximately 15 to 40 minutes after you apply the formula. If the material starts to gum up prior to removal, then re-mist the floor with fresh water - do not flood the surface - just enough to make the formula easy to push around, then squeegee the formula off the surface or use a mechanical vacuum to remove the formula, and allow the floor to dry. **DO NOT** allow areas to prematurely dry while you are working the formula in.

B) On existing floors, thoroughly clean the floor so it is water permeable. The existing floor must be completely dry before you apply the formula. Use the same application procedure as in 5.A)

above. A sheen will normally develop over time. **CAUTION - DO NOT** allow areas to puddle and dry, as they will leave hard white crystals on the surface. Dispose of waste properly, per federal, state or local environmental regulations if required. Please see the installation instructions for complete and recommended application procedure for all surfaces.

C) Application on brushed finished fully cured surfaces, such as bridge decks, roads, driveways, sidewalks, loading ramps, parking facilities and so on. *CreteDefender* is applied in **TWO** applications at the same rate of 100 to 125 square feet per gallon per application. Simply saturate the surface and let it dry using the following method. Puddles should be brushed over to dryer areas. **Surface must remain wet with CreteDefender for a minimum of 20 minutes.** Areas that dry prematurely should have more formula brushed to it or be re-sprayed. Brush the formula around the surface until it is absorbed. Then just let it dry. The goal is to get the proper amount of formula to penetrate as uniformly as possible. The second application is a repeat of the first application. **WAIT** a minimum of 4 to 6 hours between the first and second applications. **CAUTION**, there must be a minimum of **12 hours** with **NO WATER** being allowed on the surface after the last application has dried. It is recommended that you flush Bridge Decks and Roadways with fresh water 24 hours after the last application has dried, to prevent any un-reacted material that may be on the surface from becoming slick at the first rain.

6) AVAILABILITY:

CreteDefender[™] is available in 5-gallon (20-liter) buckets and 55-gallon (205-liter) drums. The product is available only through CreteDefender, Inc.

WARRANTY:

CreteDefender, Inc. warrants that *CreteDefender*[™], in its original sealed containers, will be free of defects and when used as instructed will retard deterioration of concrete surfaces.

MAINTENANCE:

Should you want to clean the concrete. Wash with mild detergent and flush with fresh water

TECHNICAL SERVICES:

Technical information and assistance may be obtained from CreteDefender, Inc., Lexington, KY 40509. (877) 830-6008. www.cretedefender.com

Please see the complete Installation Instructions for each specific surface to be treated, published on our web site www.cretedefender.com