



# TECHNICAL DATA

## CHEMTEC INT'L

### 1. PRODUCT NAME

#### **CHEMTEC ONE™**

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. MANUFACTURER

CHEMTEC INT'L INC.

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### 3. PRODUCT DESCRIPTION

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

### PROTECTING CONCRETE

This process actually produces a reactive by-product that fills the gel pours, shrinkage cracks and alligator cracks of the concrete. The by-product can in some cases reach depths of over 3 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 *CHEMTEC ONE* 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 *CHEMTEC ONE* vs non-treated samples. Reactive products have been used for years as commercial floor protectors / hardeners. We now have the proper formula for deep penetrating protection for all fully cured concrete as well.

### USES

*CHEMTEC ONE'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. *CHEMTEC ONE* can increase the useful life of normal concrete up to 40%. This process is designed for normal, dense high strength concrete and should not be used on porous concrete blocks or similar type concrete.

### 4. TECHNICAL DATA

#### TEMPERATURE LIMITS:

*CHEMTEC ONE* 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 12 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 *CHEMTEC ONE*, except when it will be used as a floor hardener/ sealer on new steel troweled surfaces.

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

**INTERNAL MAKEUP:** A proprietary blend of reactive silicates and surface active agents. Non-Toxic, Non-flammable, Non-Hazardous. NO special handling requirements under environmental regulations.

**CAUTIONS:** *CHEMTEC ONE* is high in alkaline content. Wear protective clothing, gloves, breathing apparatus as so on. 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.

#### COLOR: *CHEMTEC ONE*

is a clear liquid and comes pre mixed. **DO NOT** dilute. A slight brown tint may appear on the surface of the concrete after the final application. This is a sign that iron is present in the concrete. This will wash / wear off in of 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 175 and 250 square feet per gallon. and generally only one application is necessary.

**ANTICIPATED TREATMENT RESULTS:** The *CHEMTEC ONE* treatment 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% as results of ASTM C-779
- Increase Compression strength in deteriorated concrete.

- Reduce 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
- 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.

**SURFACE PREPARATION:** The surface of the concrete must be clean and free of foreign material, such as grease and coatings that would prevent the CHEMTEC formula from penetrating into the concrete. Thoroughly clean dirty areas. 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 steel troweled surfaces.** CHEMTEC ONE is applied in ONE application (except where specified differently) at a rate of 175 to 250 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. Keep moving the formula around the floor with bristle brooms 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. On existing floors, thoroughly clean the floor so they are water permeable.. The existing floor must be completely dry

before you apply the formula. Use the same application procedure as 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 3 page application installation instructions for complete and recommended application procedure for all surfaces.

**B) Application on brushed finished fully cured surfaces, such as bridge decks, roads, loading ramps, parking facilities and so on.** CHEMTEC ONE 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. Puddling areas should be brushed over to dryer areas. 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 in, 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 unreacted material that may be on the surface from becoming slick at the first rain.

### 6) AVAILABILITY:

CHEMTEC ONE is available in 5-gallon (20-liter) buckets and 55-gallon (205-liter) drums. The product is available only through CHEMTEC INT'L.

### WARRANTY:

CHEMTEC INT'L warrants that CHEMTEC ONE 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 CHEMTEC INT'L INC.,  
 Cincinnati Ohio 45244  
 (513) 474-2090  
 Toll Free 1-888-889-7779