

# PROTECRETE®

CONCRETE'S BEST SOLUTION

FORMERLY KNOWN AS PROTECRETE-D+PCF DENSIFIER PLUS PENETRATING CLEANING FORMULA

## DENSIFIER PLUS CLEANER

Technical Data

### 1. Product:

DENSIFIER PLUS CLEANER, a Colloidal Silicate Subsurface Membrane plus Penetrating Cleaner. Also formerly known as PROTECRETE-D+PCF Densifier plus Penetrating Cleaning Formula.

### 2. Manufacturer:

Applied Concrete Technology, Inc.  
P.O. Box 548  
Grayslake, IL 60030  
847.548.2444 or 800.228.6694  
FAX 847.548.2555  
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### 3. Description/Basic Use:

DENSIFIER PLUS CLEANER is a yellow-green (dries clear), non petroleum, odorless, environmentally neutral penetrate in a colloidal liquid base.

### As a Densifier/Sealer:

When applied to already set portland cement concrete, DENSIFIER PLUS CLEANER integrally waterproofs, densifies and preserves attributes beneficial to concrete of any age at any point during its useful lifespan. DENSIFIER PLUS CLEANER provides concrete an effective chloride ion barrier that preserves its imbedded steel. It effectively removes the potential for future hostile contamination ingress, while significantly reducing vapor transmission rate potential, effectively preserving the treated concrete's integrity. It increases surface abrasion resistance as well as surface acid/chemical damage resistance. As DENSIFIER PLUS CLEANER penetrates ultra deeply into concrete it prolifically reacts with interior ingredients such as free alkali or unused calcium hydroxide residue and prolifically converts DENSIFIER PLUS CLEANER's unusually low solids colloidal liquid to a 100% solids insoluble precipitant. It instantly provides added density and becomes an integral part of the concrete by occupying its accessible porosity and other tiny voids. It forms a breathable barrier which begins in concrete's transitional porosity located between the large surface

porosity and its small microporosity. The uniquely induced precipitant barrier does not generate any heat during its conversion from liquids to solids, nor expansion pressures at any time. This internally generated barrier remains resilient and consists of pore sizes that are much smaller than concrete's micropores. This further diminishes concrete's void percentages while increasing the impermeability, yet still allowing the concrete to retain its ability to breathe, expand and contract as it needs to. It significantly decreases the potential vapor gas transmission rate. Because the internally generated barrier has extremely small porosity, it alleviates or eliminates transmission of gases such as radon, forcing them to seek other avenues of escape rather than passing through the concrete.

DENSIFIER PLUS CLEANER halts or significantly retards internal corrosion activity. It seals, strengthens, supplements, densifies and detoxifies concrete without deleterious effect to its external appearance or physical characteristics. DENSIFIER PLUS CLEANER will not impair surface traction quality or bonding ability. Areas treated only need to be closed while treating and may be reopened immediately afterward. NOTE: If surface coating is planned wait about 8 hours (not necessary to wait if surface is track blasted) following treatment. Flush. This removes purged salts, sediments, etc. Then allow the surface to dry. Surface can then be prepared to coating manufacturer specifications. DENSIFIER PLUS CLEANER is an excellent primer application for surface toppings, paints, adhesives, etc. It addresses the reasons of potential early coating failures such as capillary/alkaline moisture, saponification, laitance, poor surface adhesion, etc. It is an excellent chloride barrier.

DENSIFIER PLUS CLEANER can be applied to old or new concrete, inside or out without detrimentally affecting the surface quality. It can be used to improve or enhance any concrete whether traffic

bearing or not. DENSIFIER PLUS CLEANER is excellent for use on streets, highway pavement, bridges, parking garage decks, airport pavement, dams, pavers, sidewalks, driveways, basements, tunnels, etc. It will stop water leakage in concrete while it is occurring in installations such as water storage reservoirs, water treatment tanks, below grade concrete with or without hydrostatic pressure, etc. The liquid travels against the water flow when applied to the negative side, permanently arresting the flow of water, a unique feat that is much less complex and labor intensive (and more economical) than trowel on remedies.

**Limitations:** DENSIFIER PLUS CLEANER contacting glass should be flushed with water and not allowed to dry, since it could etch. It dulls the shine on shiny aluminum, but the integrity is unaffected. Do not apply on frozen substrate or when temperature is near freezing.

### 4. Some Advantages:

- Significantly densifies concrete
- Internally waterproofs concrete
- Greatly diminishes permeability
- Surface traction quality unchanged
- Improves surface bond quality
- Provides internal humidity stability
- Restricts vapors transmission
- Preserves concrete's integrity
- Adds surface abrasion resistance
- Increases strength
- Eliminates internal water migration
- Increases dusting potential resistance
- Increases acid/chemical resistance
- Improves thermal resistance
- Lowers chemical reaction potential
- Lowers creep formation potential
- Alleviates carbonation effects, if any
- Prevents internal water migration
- Allows deep cleaning of surface

# DENSIFIER PLUS CLEANER Continued

## Technical Data

### 5. Technical Data:

**Physical:** Liquid

**Color:** Yellow-Green (Dries clear)

**Odor:** None

**Specific Gravity:** 1.10

**pH:** ±12

**Flammability:** None

**Toxicity:** None

**Paintability:** Excellent

**Cleanup Solvent:** Water

**Environmental Impact:** None/Neutral

**R-Factor Increase:** Up to 20%

**Surface Bond Quality:** Excellent

**Chloride Screen ability:** Excellent

**User Status:** Friendly

**VOC/VOS Compliant:** Yes

**Spill Cleanup:** Dilute/flush with water

**Recommended Coverage:** 200 S.F./Gal

### 6. Installation:

*Note: In hot climates, mist-wet the surface with water and remove any puddles prior to application.*

a. Use medium- to high-pressure airless sprayer complete with a 24-inch wand and a .019 fan tip spray jet.

b. Hold spray tip 6 inches from surface.

c. Apply to the point of saturation at the rate of 200 sq. feet per gallon with an overlapping spray pattern of approximately 20% to 30%.

d. Begin applying at the lowest level elevation. For example, walls and slopes should be applied side to side, from the bottom up.

e. Wait 20 to 30 minutes; then pressure wash using a medium- to high-pressure machine.

f. Areas of high porosity have a faster penetration rate. These areas will absorb

much faster than the normal rate of 1 to 2-1/2 hours and may require a second application of product. Severely contaminated areas may also require a second application and second pressure washing.

g. Do not apply on frozen substrate or when temperature is near freezing.

h. DENSIFIER PLUS CLEANER may etch glass or dull aluminum and can be difficult to remove from other surfaces once it dries. Take precautions to cover surrounding surfaces or rinse immediately if sprayed with Densifier.

i. DENSIFIER PLUS CLEANER is completely safe to use and environmentally friendly. We do recommend use of a painter's mask during application. Refer to MSDS.