DENSI-PROOF™ PLUS SURFACE REPELLER

SUMMARY INFORMATION & TECHNICAL DATA

PROTECT CRETE®

THE NAME SAYS IT ALL

Densi-Proof plus Surface Repeller as a Sealer: When Densi-Proof plus Surface Repeller is applied to wet, green Portland cement concrete, Densi-Proof plus Surface Repeller integrally waterproofs, densifies and preserves, attributes beneficial to concrete. Densi-Proof plus Surface Repeller seals the concrete both internally and externally.Densi-Proof plus Surface Repeller provides a tough breathable barrier just beneath the concrete's surface porosity top and on the surface of the concrete. It provides both vertical and horizontal surfaces more resistance against cracking and spalling during freeze thaw cycles. It provides concrete an effective 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. The Surface Repeller is deposited to protect the surface. As Densi-Proof plus Surface Repeller penetrates to extraordinary depths, depending on concrete's permeability factor and etc., it reacts with interior ingredients such as free alkali or unused calcium hydroxide residue and prolifically converts Densi-Proof plus Surface Repeller'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 transitional 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. 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. Densi-Proof plus Surface Repeller 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. Densi-Proof plus Surface Repeller is also an excellent chloride ion barrier.

Densi-Proof plus Surface Repeller as a Cure: Densi-Proof plus Surface Repeller is an excellent alternative concrete curing method providing a cure equal to or better than water curing. It provides the usual benefits of a curing agent, plus it provides special ingredients to the yet available capillary mix water waiting to participate in the hydration reaction processes, in the plastic or semi plastic concrete,reciprocating acceleration of hydration's reaction rates. This in turn generates increased volumes of cement paste or hydration product in a much shorter time. It utilizes all of the remaining capillary water leaving none to later evaporate and create void spaces. As a result, the concrete's capillary void spaces become more segmented and smaller than usual. Densi-Proof plus Surface Repeller provides concrete a superior cure imparting extraordinary strength, surface hardness and impermeability and subsequent maximum durability. Densi-Proof plus Surface Repeller Cure Method provides concrete with a permanent subsurface, specially formulated, colloidal liquid precipitate barrier. Its pore sizes are smaller than concrete's micropores even further diminishing permeability. Densi-Proof plus Surface Repeller forces gases such as radon, to seek other avenues of escape than through concrete's capillary system. Densi-Proof plus Surface Repeller Cure Method does not leave a surface residue to interfere with surface bonding quality. It produces concrete that is significantly more internally waterproofed, freeze-thaw damage resistant, dust resistant and acid/chemical resistant.

Section 1 Description

Densi-Proof plus Surface Repeller, a Colloidal Silicate subsurface membrane plus Surface Repellent Treatment. Densi-Proof plus Surface Repeller is an especially formulated aqueous siliconate component, cloudy-white in color (dries clear), odorless, non-petroleum, colloidal liquid which is environmentally neutral and user friendly.

Section 2 Installation Suggestions

On Already-Set Concrete:

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

Apply Densi-Proof plus Surface Repeller using a medium to high-pressure airless paint spray unit, with fan spray tip. Holding spray tip 150mm from surface, apply Densi-Proof plus Surface Repeller at the rate of 4.5m^2 per litre with an overlapping spray pattern of 50%. Actual Densi-Proof plus Surface Repeller volume used may vary, depending on concrete's permeability factor, etc. Do not puddle or buildup can occur, causing a darkening effectand/or a white percipitate that is very difficult to remove.

Densi-Proof plus Surface Repeller application should begin at lowest point in elevation. For example, walls or steep slopes should be applied side to side, from the bottom up.

As a Cure Method:

Apply Densi-Proof plus Surface Repeller with a low-

pressure non-atomizing, spray apparatus such as a pump-tank sprayer or mechanical cure slurry pump, or alternatively by flooding-on. Apply Densi-Proof plus Surface Repeller to the newly placed surface as soon as is practical following its surface finishing phase.

Densi-Proof plus Surface Repeller application should begin at the lowest point in elevation. For example, walls and slopes should be applied side to side, from the bottom up.

For Broom finished concrete the minimum recommended coverage is 4.5m^2 per litre .

For Hard or Steel troweled concrete the minimum recommended coverage rate is 6 - 8m^2 per litre .

Section 3 Precautions

1. Any coatings that may restrict access to the concrete's interior must be chemically or mechanically removed for Densi-Proof plus Surface Repeller to penetrate. If a drop of water does not penetrate into the surface within 2 minutes niether will Densi-Proof plus Surface Repeller
2. Protect areas not intended for coverage.
3. Use only on green (new) or recently poured, clean concrete. Densi-Proof plus Surface Repeller will seal in any visible stains and will purge any hidden contaminants to the surface while sealing them in.
4. Do Not allow Densi-Proof plus Surface Repeller to puddle or buildup can occur, causing a darking effect or a white dried precipitate which is very difficult to remove.
5. Densi-Proof plus Surface Repeller may etch glass or dull shiny aluminum and can be difficult to remove from other surfaces once it dries.
6. Do not apply on frozen substrate or when temperature is near freezing.
7. Densi-Proof plus Surface Repeller's spray mist is not hazardous to breathe. However, we do recommend the use of a face mask during application. Refer to MSDS.
8. Wait at least 24 hours before applying paint, adhesives or other coatings that have been treated with Densi-Proof plus Surface Repeller. Always rinse, or wash the surface before applying to remove possible purged high alkali salts that may chemically effect the bond.
9. For more information read Material Safety Data Sheet

Section 4 Technical Data

Physical: Liquid

Colour: Cloudy white (dries clear)

Odour: None

pH: ±12

Flammability: None

Hazardous Vapours: None

Clean-up Solvent: Water

U.V. Resistance: Excellent

Surface Bond Quality: Excellent

Chloride Screen ability: Excellent

VOC/VOS Compliant: YES

Section 5 Some Advantages

- **Stops or Greatly Retards Existing Corrosion**
- **Prevents or Greatly Retards Any Future Corrosion**
- **Significantly Densifies Concrete**
- **Internally Waterproofs Concrete**
- **Makes Concrete More Durable**
- **Greatly Diminishes Permeability**
- **Enhances Surface Traction Quality**
- **Greater Surface Bondability**
- **Provides Internal Humidity Stability**
- **Restricts Vapour Transmission**
- **Preserves Concrete's Integrity**
- **Eliminates Internal Water Migration**
- **Resists Freeze-Thaw Damage**
- **Easier Snow / Ice Removal**
- **Improves Thermal Resistance (R-Factor)**
- **Adds Surface Abrasion Resistance**
- **Decreases Dusting Potential**
- **Increases Acid / Chemical Resistance**
- **Lowers Chemical Reaction Potential**

Ensure you contact your nearest PROTECT CRETE® office for full technical bulletins and latest application procedures.