



Medi-Vet's one time permanent application water proofs concrete externally and internally, preserves concrete's integrity and eliminates internal water migration. Denies and protects the environment that harbours microbes, bacteria and disease. Medi-Vet is a deeply penetrating (up to and beyond 200mm) topically applied environmentally neutral solution for concrete of any age.

1. Product:

MEDI-VET™ a Colloidal Silicate Subsurface internal Membrane. Concrete densifier with an Anti-Microbial.

2. Manufacturer:

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3. Description/Basic Use:

MEDI-VET™ is a cloudy white (dries clear), non petroleum, odourless, environmentally neutral penetrate in a colloidal liquid base.

As a Densifier/Sealer:

When applied to already set portland cement concrete, MEDI-VET™ integrally waterproofs, densifies and preserves concrete of any age at any point during its useful life span. MEDI-VET™ provides concrete an effective chloride ion barrier that helps preserve its embedded steel. MEDI-VET™ also prevents contaminants from entering the concrete as well as reducing the amount of vapour that can pass through, which preserves the integrity of the treated concrete. It increases surface abrasion resistance as well as surface acid/chemical damage resistance. As MEDI-VET™ penetrates deeply into concrete, it reacts with interior ingredients such as free alkali or unused calcium hydroxide residue and prolifically converts MEDI-VET™'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 vapour 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.

MEDI-VET™ 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. MEDI-VET™ 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 24 hours following treatment and sand off, flush, or pressure wash surface to remove any possible purged contaminants. Always follow coating manufacturers specifications.*

This removes purged salts, sediments, etc. Then allow the surface to dry. Surface can then be prepared to coating manufacturer specifications. MEDI-VET™ is excellent preparation 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. MEDI-VET™ 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. MEDI-VET™ is excellent for use on streets, highway pavement, bridges, parking garage decks, airport pavement, dams, pavers, footpaths, 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 labour intensive (and more economical) than trowel on remedies.

As a Cure Method:

MEDI-VET™ is an excellent alternative concrete curing method, providing a cure equal 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 process 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 and 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.

MEDI-VET™ provides concrete a superior cure imparting extraordinary strength, surface hardness and impermeability and subsequent maximum durability.

The MEDI-VET™ Cure Method provides concrete with a permanent subsurface, specially formulated colloidal liquid precipitate barrier. Its pore sizes are smaller than concrete's micropores that even further diminish permeability. It forces even gases such as radon to seek avenues of escape other than through concrete's capillary system.

The MEDI-VET™ 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.

Limitations:

MEDI-VET™ contacting glass should be flushed with water and not allowed to dry, since it could etch. It dulls the shine on shiny aluminium, but the integrity is unaffected. Do not apply on frozen substrate or when temperature is near freezing.

4. Some Advantages:

- Permanently integrally waterproofs concrete
- Provides internal humidity stability
- Preserves matrix and over all integrity
- Increases surface abrasion resistance
- Excellent coating or topping primer
- Improves thermal resistance
- Increases strength
- Zero VOC or VOS content
- Prevents water migration
- Ice removal and cleaning easier
- Improves dusting resistance
- Improves acid/chemical resistance
- Lowers internal chemical reaction potential
- Lowers creep deformation potential
- Lowers electrostatic discharge potential
- Improves past carbonation effects

5. Technical Data:

Physical: Liquid

Colour: Cloudy-white (Dries clear)

Odour: None

Specific Gravity: 1.10

pH: ±12

Flammability: None

Toxicity: Low

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: 4.5 m² per L

6. Installation:

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

- Use medium-to high-pressure airless sprayer complete with a 60 cm wand and a .019" fan tip spray jet.
- Hold spray tip 150 mm from surface.
- Apply to the point of saturation at the rate of 4.5 m² per litre with an overlapping spray pattern of approximately 50% .
- Begin applying at the lowest level elevation. For example, walls and slopes should be applied side to side, from the bottom up.
- Wax, paint or anything else restricting access to concrete's interior must be chemically or mechanically removed for MEDI-VET™ to penetrate.
- Areas of high porosity have a faster penetration rate. These areas appear dry immediately after spraying and will require additional product.
- Do not apply MEDI-VET™ on frozen substrate or when temperature is near freezing.
- When applying paint, adhesives or other coatings, wait 24 hours after sealing with MEDI-VET™, then flush surface with water and allow to dry before coating.
- For very oily /greasy surfaces clean with detergent and high pressure hot water prior to application.
- Special note for concrete block:* Block quality, cement content and porosity size can vary widely. Some may never be completely waterproofed and will only be damp proofed. Spray twice.
- MEDI-VET™ may etch glass or dull shiny aluminium and can be difficult to remove from other surfaces once it dries. Cover surrounding surfaces or rinse immediately if sprayed.
- MEDI-VET™ is safe to use and environmentally friendly. We do recommend use of a painter's mask during application. Refer to MSDS at : www.protectcrete.com.au

7. Installation as a Cure, Hardener & Sealer:

- Follow normal application instructions, except use a medium pressure airless spray unit to avoid disturbing the top. For broom finished concrete that has not been allowed to harden, you may also use a non-atomizing spray apparatus such as a pump-tank sprayer.
- Apply to the newly placed surface as soon as is practical following surface finish.
- Apply at the rate of 3.5 to 4.5 square metres per litre for broom finished concrete; 6.5 to 8 square metres per litre on hard or steel trowelled concrete

MEDI-VET™ is a one coat spray on system that deeply penetrates (up to 200 m/m and beyond) providing permanent water proofing and protection. Withstands a minimum of 115 ft of Hydrostatic Pressure and can be effectively applied on the positive or negative side of concrete structures. There is minimum site disruption and provides early access to other trades. It is important to point out that MEDI-VET™ provides a permanent unique passive non destructive colloidal silicate gel barrier and should not be confused with temporary, soluble, weakly-linked large pore, thixotropic gels, that are formed using sodium silicates, through free lime reactions, which have proven detrimental to long-range concrete integrity. MEDI-VET™ technology is unique, it is not a Sodium, Potassium or Lithium silicate and has stood the test of time for over 25 years.

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