DeepSeal Lithium

As the most innovative and economical flooring option available today, naturally finished DeepSeal Lithium Sealed concrete will soon be the market leader in warehousing, retail showrooms, industrial floors and government buildings.

Naturally finished concrete floors are quickly becoming one of the fastest growing phenomena to ever hit the industry.

DeepSeal Lithium is unique blend of silicate and siliconate polymer technology that penetrates deep into concrete surfaces and chemically reacts with the concrete matrix and the surrounding atmosphere to produce an extremely dense and durable sealed floor. The result is concrete that resists wear and tear from abrasion, repels water and other chemicals, and reduces the appearance of tire marks and stains. DeepSeal Lithium will enhance the appearance of smooth, steel trowel concrete which will actually become more attractive over time. With regular easy maintenance, DeepSeal Lithium will continue to protect and beautify concrete for many years.

There is nothing more powerful than seeing the transformation by DeepSeal Lithium polished concrete.

DeepSeal Lithium polished concrete seals and increases the densities of the concrete to enhance protection and prolong the life of the floor.

How it Works

1st Reaction

DeepSeal Lithium reacts with the calcium hydroxide present in concrete, producing a hard crystalline structure called Calcium silicate Hydrate (CSH). This crystal fills the pores in the concrete surface, making it more dense and abrasion resistant.

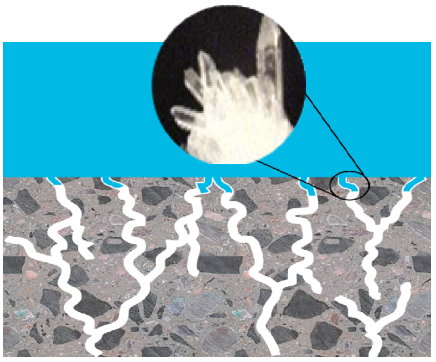

Diagram 1
Crystallization of the fine particles of Lithium to create a densified surface

2Nd Reaction

DeepSeal Lithium siliconate also reacts with atmospheric carbon dioxide, catalyzed by the alkaline materials in concrete, to form a silicone polymer that provides water and chemical repellency to the concrete.

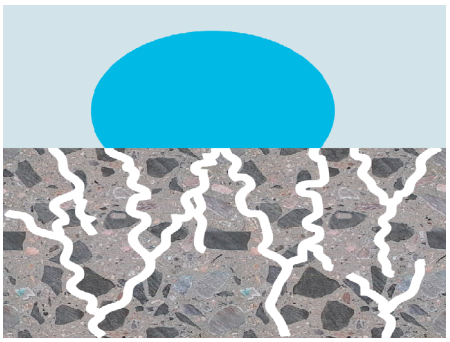

Diagram 2
Lithium siliconate repeals most liquids and chemical.

Dual Reaction

It is the dual action of both the Lithium silicate and siliconate that make DeepSeal Lithium superior to any other chemical concrete densifier or sealer on the market.

How

DeepSeal Lithium

Differs from others

The application of DeepSeal Lithium is much easier and proceeds more quickly when compared to that of Sodium or Potassium silicates, a compelling reason to consider using a Lithium Densifier instead

Typically, DeepSeal Lithium is sprayed lightly on to the concrete surface using a low pressure pump system as compared to saturating a floor surface and scrubbing as with other silicates. DeepSeal Lithium leaves no residue to clean up when applied correctly.

(If applied excessively It must be removed before it crystallized, just like other silicates).

DeepSeal Lithium having **Molar / Weight** ratio of just 0.491 as compared to Sodium of 1.032 & Potassium of 1.58 delivers a far higher reactivity with the (CHS) in concrete when compared to sodium or potassium silicates. Being a finer more reactive particle means you don't have to scrub it into concrete to encourage the reaction. Lithium ions on a per weight basis stabilise more silicate ions then sodium or potassium ions.

Lithium Silicates having a lower viscosity than sodium or potassium silicates of equal solids, means that lithium silicate's can penetrate the concrete even more effectively and to a greater depth delivering greater performance.

DeepSeal Lithium also contains potassium methyl-siliconate, which reacts with the atmospheric carbon dioxide present in air (*at around 300 to 400 ppm)*, to develop methyl-silicone resins which form in the concrete's pores. These resins being hydrophobic or water repellent in nature inhibit waterborne and oil borne stains from penetrating the concrete and causing discoloration.

DeepSeal Lithium	
BENEFITS	
Faster Results Seals and develops a shine in a matter of weeks	✓
Calmer Reaction Alkalinity and lower viscosity allow for a slower, calmer, more complete reaction, which increases surface density	✓
Controls Efflorescing DeepSeal Lithium does not create white efflorescing stains during or after application as is possible with sodium silicates. It can also control efflorescent in existing facilities.	✓
Insoluble Does not expand & Contract as a result of wet/dry cycles, will not contribute to surface crazing or Alkali Silica Reaction	✓
Increased Abrasion Resistance Although DeepSeal Lithium and sodium silicate increased abrasion resistance, DeepSeal Lithium provides higher performance	✓
Stain Resistant Improved resistance to staining with special Methyl-silicone resins	✓
Ease of Maintenance Makes Cleaning easier, for a cleaner and healthier environment	✓
Reduced Water Resistance Although both DeepSeal Lithium and Sodium Silicates reduce water absorption, DeepSeal Lithium provides dramatically increased performance.	✓
Long Term protection Penetrating action, becomes an integral part of the concrete meaning it does not chip or peal as other surface coatings will.	✓
Sulphate Stable Lithium is not a naturally occurring sulphate and will not contribute to sulphate attack	✓
Dust Proof Controls surface dusting of concrete	✓
Higher PH Levels	✓

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