The Difference in Densifiers

Lythic™ Solutions
Colloidal Silica Nano Technology
Power Of Colloidal Silica

What is Reactive Colloidal Silica and Why Is It Better for Concrete?
Reactive Colloidal Silica – nano-sized particles in an aqueous suspension – are the heart of our advanced concrete treatment system. Reactive Colloidal Silica is 99.5% pure silica suspended in an ultra-low surface tension liquid. (A “colloid” is a suspension of solid particles in a liquid; the solids are not dissolved, but they do not sink to the bottom and separate, either, due to a special process.)

The 5-nanometer particles in their low-viscosity suspension penetrate quickly, deeply, and cleanly into concrete. They react very efficiently with lime in concrete. The tiny nanoparticles have a huge surface area – 400-500 m²/gr – and offer many more chemical reaction-sites, making them far more reactive than conventional silicate densifiers. These reactions form cementitious compounds in the concrete’s pores that harden and densify the surface with less wait and less waste.

Reactive Colloidal Silica also bonds to itself, a property not found in any silicate densifier. It allows Reactive Colloidal Silica to build up more density in the surface. It enables Lythic Densifier to bond to specialty cementitious products where silicates fail to react. Recently introduced self-levelling cementitious overlays are not made from ordinary portland cement (OPC) and do not have the high lime content that densifiers usually react with. Lythic Densifier can harden these overlays and make them able to take a diamond polish.

The self-bonding ability is the driving force in our Lythic Protector, SPD Protector, and Lythic Cleaner products. Each delivers more silica, bonded into the floor, improving the surface with every application and ensuring that each application bonds tightly.

The Difference in Densifiers
The mission of a densifier is adding silica to the surface of concrete. Lythic Densifier with Reactive Colloidal Silica is 99.5% pure silica, suspended by charge repulsion in an ultra-low surface tension liquid by a proprietary, “green” manufacturing process. It increases the density of the concrete surface, making it less permeable to liquids. It increases the surface hardness, making it withstand abrasion and take a better polish. Lythic’s nano-sized silica particles react highly effectively with lime in concrete, and bond directly to silica already in the slab. Reactive Colloidal Silica even bonds to and hardens decorative cementitious overlays that are low-lime and do not react with silicate densifiers.

Lythic Densifier eliminates the problems of silicate densifiers.
• Safer for Concrete: no “whiting,” even if over-applied.
• More effective: fills the pore structure more consistently, and can even “rescue” soft or damaged concrete.
• Safer for Workers and Jobsite: It is 100X-1000X times less caustic than silicates.
• Speeds up project: No scrubbing in, no overnight cuing, no scrub off.
• Safer for Environment: No caustic residue to scrub off and dispose of as a hazardous material. Shipped as concentrate to reduce transportation impacts.
• Works Well on Overlays too: bonds directly to silica in the overlay cement, making it stronger and more polishable.
• Cost effective: cuts steps, reduces labor, high coverage rate, shipped as concentrate to save shipping costs.

Lythic Densifier is part of a system of advanced Reactive Colloidal Silica chemistry that establishes and maintains exposed concrete using on-going Colloidal Silica enhancement that becomes part of the floor structure.
Lythic Densifier

Lythic™ Densifier’s unique formulation of uniform, concentrated, Nano sized particles, suspended in an ultra low surface tension liquid, penetrates deeply into concrete surfaces bonding with the cement components of the slab. Lythic™ Densifier makes an extremely hard, dense floor surface that has increased wear resistance to foot and forklift traffic. It is water based and environmentally friendly and is VOC compliant in all states of USA.

Coverage: 500 sq.ft/gal
Packaging:
• 20L / can
• 209L / drum

Lythic Protector

Lythic™ Protector is a penetrating concrete sealer formulated to enhance and protect polished concrete floors. It is a unique product that includes colloidal silica for surface hardness and lithium for water repellency. It is a water-based, environmentally friendly product that enhances colourd concrete floors, increase durability, as well as slip resistance.

Coverage: Approx 1,500 to 2,000 ft² / gal
Packaging:
• 20L / can
• 209L / drum

SPD Protector

SPD (Silica Polymer Dispersion) is a two-part polymer combined with nano-sized colloidal silica which utilizes new protection technology that significantly increases concrete’s resistance to stains, acid etching, and liquid penetration, but remains breathable.

Coverage: 1000 to 2000 ft²/gal
Packaging
Lythic SPD Protector is packaged as a 2 part kit. Total volumes available:
• 2 gallon kit (7L)
• 4 gallon kit (15L)

Lythic XL Densifier

Lythic XL Densifier is a colloidal silica based concrete hardener and densifier that prevents dusting and increases durability in concrete floors. Engineered with a specifically sized silica particle, it is designed to strengthen soft porous concrete slabs. Floors treated with Lythic XL Densifier are durable and resistant to dusting and wear. It fills the surface capillaries of concrete with silica creating a permanent bond that makes floor surfaces harder, less prone to dusting and the absorption of most liquids.

Coverage: 500 sq.ft/gal
Packaging:
• 20L / can
• 209L / drum

Lythic Cleaner

Lythic™ Cleaner is a non-corrosive cleaner, formulated to remove surface dirt and soil from concrete floor surfaces. It fortifies concrete surfaces with amorphous silica as it cleans to increase durability and maintain surface polish.

Packaging:
• 20L / can
• 209L / drum

Colors for Concrete

Bring a splash of color to your concrete floors as you increase durability and add elegance with Lythic’s new Duet Colors for Concrete.

Water based Duet Colors mix with Lythic Densifier for a dual purpose use. One simple application penetrates concrete with color as it adds surface hardness. With Duet Colors there are no hazardous chemicals or contentious fumes to manage.

Packaging:
• 16 oz. bottle
Designed solutions for architects, engineers and builders.