



# LYTHIC

# POLISHING PRODUCTS



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# LYTHIC

# COLLOIDAL SILICA & CEMENT

## THE HEART OF LYTHIC TECHNOLOGY

COLLOIDAL SILICA is at the heart of Lythic technology. It is a substance that reacts with the chemistry of concrete to produce more cementitious material, translating into denser concrete with greater strength.

Concrete is a mixture of Portland cement, water and aggregate. Water reacts with Portland cement ("cement hydration"), forming a new substance called CEMENT PASTE. At first, it is soft or liquid, but hardens within a few hours into crystal-like mineral structures. This hardening occurs because of chemical changes, not because of drying.

Cement paste binds the aggregate together to form concrete. The "active ingredients" that do the binding are called CALCIUM SILICATE HYDRATES (C-S-H). Concrete strength is determined by the strength of the cement paste. Aggregate adds strength mechanically, but it depends on the paste holding it in place.

CALCIUM HYDROXIDE, commonly called lime, is a by-product of



hydration that can make up as much as 25% of the cement paste. It does not add strength, has no beneficial effects and can cause discoloration ("EFFLORESCENCE") or damage under some conditions. Calcium hydroxide is the main cause of concrete dusting.

POZZOLANS are substances that react with calcium hydroxide to form additional C-S-H, most of which (FLY ASH, SILICA FUME), can only be added to concrete while it is being

mixed. Colloidal silica densifiers are pozzolans that can be added to the surface of concrete after it has hardened ("cured"). They penetrate the surface pores of the concrete, react with lime found there to make new C-S-H, hardening the top layer.

Colloidal silica can be added to concrete after it has hardened or while it is fresh. It is virtually pure, nano-scale silica particles suspended in a liquid. It reacts very efficiently and leaves virtually no residue. It bonds to concrete and to itself, achieving a fast buildup of hard material.

Other densifiers are silicates, combinations of silica with mineral salts (sodium, potassium, or lithium). They do not react as efficiently as pure nano-sized silica, and the salt residues can create problems. They are also more alkaline (caustic) than colloidal silica, making them more dangerous to handle and invoking hazardous waste rules in some locations.



**LYTHIC**

# DENSIFIER & XL

## CONCENTRATE & READY-TO-USE FORMULA



LYTHIC DENSIFIER with reactive colloidal silica is 99.5% pure silica, suspended through a proprietary “green” manufacturing process in an ultra-low surface tension liquid, allowing for greater penetration. It reacts with concrete to increase surface density, making it less permeable to liquids and improving impact and abrasion resistance. Lythic’s nano-sized silica particles react with lime and bond directly to silica already in the concrete. Silica bonding results in greater hardening than standard densification. Reactive colloidal silica bonds and hardens decorative cementitious overlays that are low-lime and do not react well with sodium, lithium or potassium silicates.

LYTHIC XL is a larger particle-size version of Lythic Densifier, designed for fast build-up for burnishing, and to repair soft slab surfaces.

### FEATURES & BENEFITS:

- **Saves time and labor**
- **No hazardous waste removal**
- **Prevents dusting and increases durability**
- **Reacts within minutes**
- **No surface residue to scrub off**
- **No whitening when dry**
- **Low viscosity for quicker penetration**
- **Safer pH level (less than 10 pH)**
- **Will not contribute to alkali-silica reaction (ASR)**
- **Concentrate and ready-to-use formulates**



**LYTHIC**

# DENSIFIER & XL CONCENTRATE & READY-TO-USE FORMULA

## 001: Product Description

**Lythic Densifier** and **Lythic XL Densifier** with reactive colloidal silica are densifiers/hardeners for concrete, used to improve the performance and appearance of concrete floors. They increase surface hardness, compressive strength, abrasion-resistance, and liquid penetration-resistance.

**Lythic Densifier** and **Lythic XL Densifier** are 99.5% pure silica of nano-particles, suspended in an ultra-low surface tension liquid using a proprietary, “green” manufacturing process. It reacts with calcium hydroxide (*aka free lime*) in the concrete matrix to create additional calcium silicate hydrates (C-S-H), the active binder in cement paste which becomes a permanent part of the concrete.

**Lythic Densifier** and **Lythic XL Densifier** reduce dusting, efflorescence, and ASR. It is a zero-VOC, non-toxic, safe-to-handle liquid that does not require scrubbing in, removal, or hazardous residue disposal and does not leave discoloring mineral salt deposits on concrete.

**Lythic Densifier** works extremely well on all concrete types. Particles are approximately 5 nanometers (5nm) ensuring superior penetration.

**Lythic XL Densifier** is specifically designed to work with more porous concrete with a larger average 50 nanometer (50nm) particle size.

## 002: Features & Advantages

- Simple spray application
- Prevents dusting
- Hardens surface
- Increases impact resistance
- Improves abrasion resistance, long term durability
- Reduces capillary size to make the surface less porous
- Increasing resistance to liquid penetration
- Resistant to staining
- Bonds to silica in concrete
- Extends service life of older slabs
- Works with low-lime decorative cementitious overlays
- Does not yellow or whiten concrete
- Safe to handle – lower pH than silicates
- Fast reacting – one hour or less

## 003: Sustainability

**Lythic Densifiers** increase the durability and performance of a concrete surface, extending its service life and minimizing materials and energy consumption for its replacement.

- South Coast Air Quality Management District compliant
- Zero-VOC formula
- Ships as concentrate to lower environmental impacts
- Reduced shipping and storage costs
- No hazardous waste created
- Qualifies for LEED credits

## 004: Materials Packaging

**Lythic Densifiers Concentrate 4:1** (*Red Lythic Logo*)

- 1 gallon / 3.78 liter jug
- 5 gallon / 19 liter pail
- 55 gallon / 208 liter drum
- 270 gallon / 1021 liter tote (*IBC*)



\*Note the concentrated product will yield 5 times the volume when mixed 4:1 with clean potable water.

**Lythic Densifiers Reay-to-Use** (*Green Lythic Logo*)

- 1 gallon / 3.78 liter jug
- 5 gallon / 19 liter pail
- 55 gallon / 208 liter drum
- 270 gallon / 1021 liter tote (*IBC*)



## 005: Coverage Rates

**Lythic Densifiers** will yield different coverage rates depending on the porosity of the floor. Test on a small sample area to determine appropriate application rate and technique before applying to entire project area.

*\*(See Section 009: Project Testing)*

Use these coverage rates as a starting point to determine necessary application rate. Coverage rates are based on a mixed ready-to-use (*RTU*) gallon of **Lythic Densifier & XL Densifier**

Concrete Condition	Coverage Rate (US, per gallon)	Coverage Rate (Metric, per liter)
High Porosity Concrete	250 - 400 ft <sup>2</sup>	6.1 - 9.8 m <sup>2</sup>
Medium Density Concrete	300 - 500 ft <sup>2</sup>	7.4 - 12.3 m <sup>2</sup>
Hard Concrete	400 - 600 ft <sup>2</sup>	9.8 - 14.7 m <sup>2</sup>
High Density Concrete	500 - 700 ft <sup>2</sup>	12.3 - 17.2 m <sup>2</sup>

### 006: Storage & Shelf Life

**Lythic Densifiers** should be kept in the original container when possible with the lid fastened tightly. **Lythic Densifier & XL** has an optimized shelf life of 24 months from the date of manufacture.

- Keep in a dry place
- Temp range of 40-100°F or 4-38°C
- Do not allow to freeze

### MIXING & APPLICATION

#### 007: Mixing & Dilution

**Lythic Densifier & XL Densifier** are available in two concentrations. Consult the package label to ensure correct mixing and usage.



**Lythic Densifiers (Red Lythic Logo)** is shipped and packaged in concentrate formula. Before use, it must be diluted with clean potable water, 4:1.

- 1) Before opening, agitate **Lythic Densifier** concentrate.
- 2) Use clean potable water to mix with **Lythic Densifier**.
- 3) Mix in a container or directly into sprayer.
- 4) Ratio, one part **Lythic Densifier** to four parts water.
- 5) Mix, agitate or stir well.



**Lythic Densifiers (Green Lythic Logo)** is shipped and packaged in Ready-to-Use formula requiring no mixing.

- 1) Before opening, agitate **Lythic Densifiers** ready-to-use.
- 2) Pour **Lythic Densifiers** directly into sprayer.

### 008: Equipment

Apply **Lythic Densifiers** using a low-pressure pump sprayer. Use either a fan tip or a cone tip for even spraying. Automatic low pressure sprayers can also be used for larger projects.

### 009: Project Testing

To assure that desired performance and appearance specifications are met, test a sample area of each slab to be treated, using the proposed treatment methods and techniques, coverage rates, and equipment, with the work

performed by the same installation personnel who will do the project.

Test section should be large enough to properly represent the overall slab. Check whether coverage rate is appropriate, that concrete accepts the product, and that product is reacting with slab. **NOTE:** Grinding and polishing operations may significantly alter slip-resistance of surface. To determine that safe levels of wet and dry slip-resistance are achieved, it is necessary to apply the complete treatment, including the protection layer. **Lythic Protector** increases slip resistance.

### 010: Pre-Application

Advanced planning is critical to all successful concrete work, notations worth considering when using **Lythic Products**.

- Any adjacent areas, surfaces, or objects not intended to be treated with **Lythic Densifiers** should be protected from overspray or drift with plastic sheeting or other proven protective material.
- Surface must be clean and structurally sound, and clear of membrane-forming curing compounds, oils, dust and other surface contaminants that will prevent **Lythic Products** from having full contact with the concrete. Do not use acidic or aggressive detergents when cleaning before or after application of **Lythic Products**. Use **Lythic Cleaner** or other pH neutral cleanser.
- Measure area (square feet:  $ft^2$  / square meter:  $m^2$ ) that will require **Lythic Product**.
- Mix an appropriate quantity of **Lythic Products** for job-size, per instructions in Section 007: Mixing & Dilution, using estimated coverage rates in Section 005: Coverage Rates or the coverage chart on page 1.
- Check that sprayers and tips are in working order.
- Designate trained operator(s) to apply **Lythic Products** throughout project to ensure consistent application.

# DENSIFIER & XL

## CONCENTRATE & READY-TO-USE FORMULA

### 011: Application Guidelines

**Lythic Densifiers** can be applied to new or existing concrete. Application may vary depending on the type of project and other jobsite specifics. The information provided is best practice guidelines for **Lythic Densifiers**. Every project will present variables that may require adjustment of application procedures during the job. These guidelines are based on terminology used within the concrete and flooring industry sector.

*(See coverage chart on page 1)*

#### 011-a: General Application Instructions

- 1) Agitate **Lythic Densifiers** RTU mixture before pouring into sprayer.
- 2) Pour **Lythic Densifiers** RTU mixture into sprayer. Keep sprayer pressure at optimized level, allowing even distribution when applying to concrete surface.
- 3) Spray apply **Lythic Densifiers**, holding spray tip 12-24 inches above surface and moving in a circular motion to achieve even distribution. Spray enough to form an even sheen and ensure complete saturation of surface. Avoid puddling.
- 4) Keep the surface wet for 10 to 15 minutes, applying additional **Lythic Densifiers** only as needed. Areas of higher porosity will require more **Lythic Densifier** or use **XL Densifier**.
- 5) Allow surface to dry completely before further operations commence.

#### 011-b: Diamond Grinding / Polishing

As part of concrete polishing, **Lythic Densifier** is typically applied after the initial diamond cutting stages or surface stock removal is completed and prior to the higher levels of diamond polishing. In most instances, it is used after 80-grit to 400-grit steps.

See coverage chart for application stages on page 1.

#### 011-c: New (Green) Concrete

**Lythic Densifier** can be applied the same day, once the surface has hardened enough not to damage the concrete surface/finish. Alternatively, within 1 to 5 days after the concrete placement, when the peak of hydration and out-gassing has slowed enough to allow sufficient penetration.

Application at this stage dramatically increases abrasion resistance, will help to prevent dusting and ASR, and will improve overall surface performance. Slab must be clean and free of all contaminants such as curing compounds, bond breakers, release oils, dust and debris, etc. Apply per instructions in Section 011-a: General Application Instructions steps 1-5. No flooding, neutralizing, or rinsing is necessary.

#### 011-d: Application Guidelines Next Steps

Polishing or other treatments can begin when **Lythic Densifiers** have dried. Concrete intended to be left exposed or polished should be protected with **Lythic Protector** or other appropriate finish protection, as the final step of treatment. Polished concrete should be cleaned with **Lythic Cleaner** or other pH neutral cleaners. Avoid acidic cleaners and detergents containing hydroxides, critics, or sulfates as these may etch or dull the surface.

### 012: Limitations & Important Notes

- **Lythic Densifiers** densify and harden concrete surfaces, but should not be confused with concrete sealers; they will not seal or prevent staining.
- Floors treated with **Lythic Densifiers** should not be cleaned with acidic or abrasive cleaning fluids. Medium to long-term exposure to aggressive cleaning products will cause damage. **Lythic Cleaner** or other pH-neutral cleansers should be used for continuous maintenance of concrete that has been treated with **Lythic Densifiers**.
- During application of **Lythic Densifiers** and until dry, treated surface will be slippery. Use extreme care when walking on wet **Lythic Densifiers**.
- Jobsite samples are strongly recommended prior to application of all **Solomon/Brickform** and **Lythic** products.

### 013: Industry Compliance

- VOC Compliant
- USDA-Authorized
- National Floor Safety Institute
- LEED-Green Building Rating System
- GreenSpec listed
- Canadian Food Inspection Agency
- OSHA & ADA non-slip requirements

# DENSIFIER & XL

## CONCENTRATE & READY-TO-USE FORMULA

**014: Lythic System Products:**

- Lythic DAY1 .....(Troweling aid)
- Lythic Densifier .....(Smaller particle densifier)
- Lythic Densifier XL .....(Larger particle densifier)
- Lythic Protector .....(Color enhancer & protector)
  
- Lythic Cleaner .....(Colloidal silica cleaning agent)
- Pro-Dye .....(Penetrating colorant concentrate)
- Stealth Seal .....(Penetrating sealer)
- Solomon Colors .....(Integral color for concrete)
- Brickform .....(Sealers and processes for concrete)

**HEALTH & SAFETY****015: Precautions**

**WARNING: FOR PROFESSIONAL USE ONLY.** Before using product, read product SAFETY DATA SHEET (SDS) and instructions on packaging. **ALKALINE**

**CONCENTRATE:** Contact can damage eyes, skin, and other body tissues. **HANDLE WITH CARE.** Eye and skin irritant. Digestive tract irritant; **DO NOT TAKE INTERNALLY.** **KEEP OUT OF REACH OF CHILDREN.** Spray mist is respiratory tract irritant. Use only with adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, clothing. Observe appropriate safety and jobsite controls. Wear appropriate protection including eye protection and chemical-resistant gloves. Ensure fresh air-flow during application and until dry. If you experience headaches, dizziness, eye watering, or if air monitoring shows vapor/mist levels above applicable limits, wear a properly fitted P100/organic vapor respirator (NIOSH TC-84A approved), used according to manufacturer's directions, during application and drying.

**SLIP/FALL DANGER:** During application of **Lythic Densifiers** and until dry, treated surface will be slippery. Use extreme care when walking on wet **Lythic Densifiers.**

**016: First Aid**

**Ingestion:** Not expected to be toxic. Never give an unconscious person anything to ingest. If swallowed, immediately give two glasses of water, seek medical attention if ill effects develop.

**Inhalation:** May cause irritation. Remove to fresh air and provide oxygen. If not breathing, give artificial respiration. Seek medical attention if irritation persists.

**Eye Contact:** Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** May cause irritation. Wash affected area with soap and water. Remove contaminated clothing and shoes. Seek medical attention if irritation persists.

**017: Physical Properties**

Appearance .....	Clear or tinted liquid
VOC Content.....	0 g/l (VOC- free)
Active Ingredients.....	100% of total solids
Material pH .....	apx 9.5-10
Freeze point .....	32°F - 0°C

**018: Warranty**

**Lythic Products** is intended for use by licensed contractors and installers, experienced and trained in the use of these types of products. It is warranted to be of uniform quality, within manufacturing tolerances. The manufacturer has no control over the use of this product, therefore, no warranty, expressed or implied, is or can be made either as to the effects or results of such use. In any case, the manufacturer's obligations shall be limited to refunding the purchase price or replacing **Lythic Products** proven defective. The end user shall be responsible for determining product's suitability and assumes all risks and liability.

**Additional Information & Technical Support:**

This document covers the basic guidelines and instructions for the use of **Lythic Products**. Further instruction or technical information related to specifying **Lythic Products** or systems are available upon request. Contact Solomon Colors or your local distributor.

# LYTHIC

# PROTECTOR CONCENTRATE

LYTHIC  
PROTECTOR  
CONCENTRATE



LYTHIC PROTECTOR improves on the effectiveness offered by traditional stain protectors by bonding additional silica to the concrete, further toughening it.

Lythic Protector enhances color and creates depth of shine. It cures for foot traffic within hours and improves traction of polished surfaces.

#### FEATURES & BENEFITS:

- Extends stain resistance
- Enhances color
- Provides durable traffic-wear resistance
- Improves traction
- Works well burnished or not
- Simplifies maintenance
- Concentrate formula
- Multiple applications over prolonged periods



# LYTHIC PROTECTOR CONCENTRATE

## 001: Product Description

**Lythic Protector** is a colloidal silica-based, breathable concrete sealer that protects and enhances polished concrete floors. It is a unique product that improves surface hardness through colloidal silica reaction during application. It is specially formulated to reduce liquid penetration, enhance color, increase gloss reading and improve traction of polished concrete surfaces.

**Lythic Protector** is packaged under the red label concentrate formula and, in most cases, will be mixed 1:1 with clean potable water. In some cases when the concrete porosity is more severe, **Lythic Protector** can be used directly in the concentrate state without dilution.

## 002: Features & Advantages

**Lythic Protector** is specifically designed to be applied to hard troweled concrete or polished concrete surfaces.

- Extends stain resistance
- Enhances color
- Provides durable traffic-wear resistance
- Improves traction
- Works well burnished or not
- Simplifies maintenance
- Concentrate formula
- Multiple applications over prolonged periods

## 003: Sustainability

**Lythic Protector** increases the performance and protection of a polished concrete surface, extending its service life and minimizing materials and energy consumption for its replacement.

- South Coast Air Quality Management District compliant
- Zero-VOC formula
- Ships as concentrate to lower environmental impacts
- Reduced shipping and storage costs
- No hazardous waste created
- Qualifies for LEED credits

## 004: Materials Packaging

**Lythic Protector** 1:1 (*Red Lythic Logo*)

- 1 gallon / 3.78 liter jug
- 5 gallon / 19 liter pail
- 55 gallon / 208 liter drum
- 270 gallon / 1021 liter tote (*IBC*)



\*Note: **Lythic Protector** concentrated product will yield 2 times the volume when mixed 1:1 with clean potable water. **Lythic Protector** can be used as a ready-to-use formula for concrete surface with high porosity.

## 005: Coverage Rates

**Lythic Protector** will yield different coverage results depending on the porosity of the floor. Test on a small sample area to determine appropriate application rate and technique before applying to entire project area.

*(See Section 009: Project Testing)*

Use these coverage rates as a starting point to determine necessary application rate.

Lythic Protector	Coverage Rate (US, per gallon)	Coverage Rate (Metric, per liter)
Mixed 1:1	1200 - 1800 ft <sup>2</sup>	37 - 49 m <sup>2</sup>
Used As Concentrate	600 - 900 ft <sup>2</sup>	18.5 - 24.5 m <sup>2</sup>

## 006: Storage & Shelf Life

**Lythic Protector** should be kept in the original container when possible, with the lid fastened tightly. **Lythic Protector** concentrate has an optimized shelf life of 24 months from the date of manufacture.

- Keep in a dry place
- Temp range of 40-100°F or 4-38°C
- Do not allow to freeze

## MIXING & APPLICATION

### 007: Mixing & Dilution

**Lythic Protector** is designed to be mixed 1:1 with clean potable water. In some cases **Lythic protector** can be applied as a concentrate for surfaces that have a higher porosity.

#### **Lythic Protector** 1:1 Ratio

- 1) Before opening, agitate **Lythic Protector** concentrate.
- 2) Use clean potable water to mix with **Lythic Protector**.
- 3) Mix in a container or directly into sprayer.
- 4) Ratio: one part **Lythic Protector** to one part water.
- 5) Mix, agitate or stir well.

#### **Lythic Protector** Concentrate

- 1) Before opening, agitate **Lythic Protector** concentrate.
- 2) Pour **Lythic Protector** directly into sprayer.

**LYTHIC**

# PROTECTOR CONCENTRATE

## 008: Equipment

Apply **Lythic Protector** using a low-pressure pump sprayer. Use either a fan tip or a cone tip for even spraying. Automatic low pressure sprayers can also be used for larger projects. Micro-fiber or flat cotton pad applicators are recommended for material placement.

## 009: Project Testing

To assure that desired performance and appearance specifications are met, test a sample area of each slab to be treated, using the proposed treatment methods and techniques, coverage rates, and equipment, with the work performed by the same installation personnel who will do the project.

A test section should be large enough to properly represent the overall slab. Check whether coverage rate is appropriate, that concrete accepts the product, and that product is reacting with slab. **NOTE:** Grinding and polishing operations may significantly alter slip-resistance of surface. To determine that safe levels of wet and dry slip-resistance are achieved, it is necessary to apply the complete treatment, Lythic Densifiers, or Lythic Protector which will increase slip resistance.

## 010: Pre-Application

Advanced planning is critical to all successful concrete work. Notations worth considering when using **Lythic Products:**

- Any adjacent areas, surfaces, or objects not intended to be treated with **Lythic Protector** should be protected from overspray or drift with plastic sheeting or other proven protective material.
- Surface must be clean and structurally sound, and must be clear of membrane forming curing compounds, oils, dust and other surface contaminants that will prevent **Lythic Products** from having full contact with the concrete. Do not use acidic or aggressive detergents when cleaning before or after application of **Lythic Products**. Use **Lythic Cleaner** or other pH neutral cleanser.
- Measure area (square feet:  $ft^2$  / square meter:  $m^2$ ) that will require **Lythic Products**.

- Mix an appropriate quantity of **Lythic Products** for job-size, per instructions in Section 007: Mixing & Dilution, using estimated coverage rates in Section 005: Coverage Rates or the coverage chart on page 1.

- Check that sprayers and tips are in working order.

- Designate trained operator(s) to apply **Lythic Products** throughout project, to ensure consistent application.

## 011: Application Guidelines

Application may vary depending on the type of project and other jobsite specifics. The information provided is best practice guidelines for **Lythic Protector**. Every project will present variables that may require adjustment of application procedures during the job. These guidelines are based on terminology used within the concrete and flooring industry sector.

*\*See coverage chart on page 1)*

- Agitate the premixed product before application.

- Pour **Lythic Protector** into the sprayer. Keep the sprayer at optimized levels, allowing even distribution when applying to the concrete surface.

- Dampen the micro-fiber or flat cotton pad with **Lythic Protector** before spreading material around.

- Spray-apply **Lythic protector** in circular motions with the sprayer tip approximately 18" (45 cm) away from the concrete surface.

- Use the micro-fiber or flat cotton pad applicator to spread the **Lythic Protector** in a thin film across the surface. Using a figure eight motion with the applicator helps to ensure even material distribution.

- Keep a wet edge between the sprayer and application pad at all times. Do not allow dry lines or puddling.

- Allow **Lythic Protector** to become tack-free before applying a second application or high speed burnishing.

- For each application follow the same steps.

**LYTHIC**

# PROTECTOR CONCENTRATE

## 011: Application Guidelines (Continued)

High speed burnishing using a diamond-impregnated or hogs-hair pad will enhance the gloss and clarity of the surface. Allow 12 hours before light foot traffic and 24 hours before heavy traffic. Do not allow standing water to remain on the surface for a minimum of 72 hours.

## 012: Limitations & Important Notes

- **Lythic Protector** is a breathable penetrating sealer that should be considered a sacrificial layer requiring periodic re-application when needed.

- **Lythic Protector** provides temporary protection from staining and etching agents, but it will not seal or prevent staining indefinitely. Spills must be removed in a timely manner to assure complete protection of the floor finish.

- Floors treated with **Lythic Protector** should not be cleaned with acidic or abrasive cleaning fluids. Medium to long-term exposure to aggressive cleaning products will cause damage. **Lythic Cleaner** or other pH neutral cleansers should be used for continuous maintenance of concrete that has been treated with **Lythic Products**.

- During application of **Lythic Protector** and until dry, treated surface will be slippery. Use extreme care when walking on wet **Lythic Protector**.

- Jobsite samples are strongly recommended prior to application of all **Solomon/Brickform** and **Lythic products**.

## 013: Industry Compliance

- VOC Compliant
- USDA-Authorized
- National Floor Safety Institute
- LEED-Green Building Rating System
- GreenSpec listed
- Canadian Food Inspection Agency
- OSHA & ADA non-slip requirements

## 014: Lythic System Products:

- **Lythic DAY1** .....(Troweling aid)
- **Lythic Densifier** .....(Smaller particle densifier)
- **Lythic Densifier XL** .....(Larger particle densifier)

- **Lythic Protector** .....(Color enhancer & protector)

- **Lythic Cleaner** .....(Colloidal silica cleaning agent)

- **Pro-Dye** .....(Penetrating colorant concentrate)

- **Stealth Seal** .....(Penetrating sealer)

- **Solomon Colors** .....(Integral color for concrete)

- **Brickform** .....(Sealers and processes for concrete)

## HEALTH & SAFETY

### 015: Precautions

WARNING: FOR PROFESSIONAL USE ONLY. Before using product, read product SAFETY DATA SHEET (SDS) and instructions on packaging. ALKALINE CONCENTRATE: Contact can damage eyes, skin, and other body tissues. HANDLE WITH CARE. Eye and skin irritant. Digestive tract irritant; DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN.

Spray mist is respiratory tract irritant. Use only with adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, clothing. Observe appropriate safety and jobsite controls. Wear appropriate protection including eye protection and chemical-resistant gloves. Ensure fresh air-flow during application and until dry. If you experience headaches, dizziness, eye watering, or if air monitoring shows vapor/mist levels above applicable limits, wear a properly fitted P100/ organic vapor respirator (NIOSH TC-84A approved), used according to manufacturer's directions, during application and drying. SLIP/FALL DANGER: During application of **Lythic Protector** and until dry, treated surface will be slippery. Use extreme care when walking on wet **Lythic Protector**.

### 016: First Aid

**Ingestion:** Not expected to be toxic. Never give an unconscious person anything to ingest. If swallowed, immediately give two glasses of water, seek medical attention if ill effects develop.

# LYTHIC

# PROTECTOR CONCENTRATE

**Inhalation:** May cause irritation. Remove to fresh air and provide oxygen. If not breathing, give artificial respiration. Seek medical attention if irritation persists.

**Eye Contact:** Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** May cause irritation. Wash affected area with soap and water. Remove contaminated clothing and shoes. Seek medical attention if irritation persists.

#### 017: Physical Properties

Appearance ..... Milky white tinted liquid  
VOC Content.....25 g/l (Low- VOC)  
Active Ingredients.....100% of total solids  
Material pH .....apx 10-11  
Freeze point ..... 32°F - 0°C

#### 018: Warranty

**Lythic Products** are intended for use by licensed contractors and installers, experienced and trained in the use of these types of products. It is warranted to be of uniform quality, within manufacturing tolerances. The manufacturer has no control over the use of this product, therefore, no warranty, expressed or implied, is or can be made either as to the effects or results of such use. In any case, the manufacturer's obligations shall be limited to refunding the purchase price or replacing **Lythic Products** proven defective. The end user shall be responsible for determining product's suitability and assumes all risks and liability.

#### Additional Information & Technical Support:

This document covers the basic guidelines and instructions for the use of **Lythic Products**. Further instruction or technical information related to specifying **Lythic Products** or systems are available upon request. Contact Solomon Colors or your local distributor.



# LYTHIC

# CLEANER



Cleaning a concrete floor does more than simply maintain appearance and hygiene; it is vital to the continued performance of the finish. Dirt and grit must be removed so they don't become abrasives that compromise the stain protection layer.

LYTHIC CLEANER goes beyond cleansing by adding silica to the surface as it cleans. Reactive colloidal silica bonds to concrete, so every cleaning improves resistance to abrasion and liquid penetration. It is chemically matched to Lythic's stain protection products for complete compatibility.

Sold as a concentrate, mild but effective, it is ideally suited for everyday use and is the best investment you can make in maintaining a concrete floor finish.

## FEATURES & BENEFITS:

- **Mild, safe, and non-corrosive**
- **Maintains and replenishes concrete protection**
- **Adds silica during cleaning**
- **Removes abrasive materials**
- **Simplifies maintenance**
- **Water-based, environmentally friendly**
- **Improves traction**
- **Concentrate formula**



**LYTHIC**

# CLEANER

## 001: Product Description

**Lythic Cleaner** is an exciting product that hardens and enhances hard troweled floors and polished concrete. Unlike traditional cleaners, **Lythic Cleaner** is produced with colloidal silica designed to bond to other **Lythic Products** used in advanced floor finishes.

**Lythic Cleaner** is an effective, non-corrosive cleaning agent for highly finished or polished concrete surfaces. Cleaning a concrete floor does more than simply maintaining appearance and hygiene; it is vital to the continued performance of the finish. Dirt and grit must be removed so they do not become abrasives that compromise the stain protection layer.

**Lythic Cleaner** goes beyond cleansing by adding silica to the surface as it cleans. Reactive colloidal silica bonds to concrete, so every cleaning improves resistance to abrasion and liquid penetration. It is chemically matched to the **Lythic** stain protection products for complete compatibility. Sold as a concentrate, it is ideally suited for everyday use and is the best investment you can make in maintaining a concrete floor finish.

## 002: Features & Advantages

- Mild, safe and non-corrosive
- Maintains and replenishes concrete protection
- Adds silica during cleaning
- Removes abrasive materials
- Simplifies maintenance
- Water-based, environmentally friendly
- Improves traction
- Concentrate formula

## 003: Sustainability

**Lythic Cleaner** increase the performance and protection of a polished concrete surface, extending its service life and minimizing materials and energy consumption for its replacement.

- South Coast Air Quality Management District compliant
- Low-VOC formula
- Ships as concentrate to lower environmental impacts
- Reduced shipping and storage costs
- No hazardous waste created
- Qualifies for LEED credits

## 004: Materials Packaging

### **Lythic Densifiers Concentrate 32:1**

- 1 gallon / 3.78 liter jug
- 5 gallon / 19 liter pail
- 55 gallon / 208 liter drum
- 270 gallon / 1021 liter tote (*IBC*)

*\*Note: the concentrated product will yield 33 times the volume when mixed 32:1 with clean potable water.*

## 005: Coverage Rates

**Lythic Cleaner** will yield different coverage results depending on the application method. Hand mopping will yield higher usage than using an auto-scrubber. Test on a small sample area to determine appropriate application rate and technique before applying to entire project area.  
*\*(See Section 009: Project Testing)*

- Auto-scrubber: Refer to equipment manual
- Hand mopping: 1 RTU gal = 250-450 ft<sup>2</sup>

## 006: Storage & Shelf Life

**Lythic Cleaner** should be kept in the original container when possible, with the lid fastened tightly.

**Lythic Cleaner** concentrate has an optimized shelf life of 36 months from the date of manufacture.

- Keep in a dry place
- Temp range of 40-100°F or 4-38°C
- Do Not Allow to Freeze

## MIXING & APPLICATION

### 007: Coverage Rates

**Lythic Cleaner** is a concentrated product that needs to be diluted with clean water.

- Mix 32:1 for regular cleaning by hand-mop or auto-scrubber (*1 gal Lythic Cleaner to 32 gal water*) 4 oz per gal of water.
- Mix 16:1 for heavily soiled areas (*1 gal Lythic Cleaner to 16 gal water*) 8 oz per gallon of water.

## 008: Equipment

Apply **Lythic Cleaner** using an auto-scrubber or hand mop with two buckets (one for application and the other for rinse water).

**009: Project Testing**

To assure that desired performance and appearance specifications are met, test a sample area of each slab to be treated using the proposed treatment methods and techniques, coverage rates, and equipment, with the work performed by the same installation personnel who will do the project.

Test section should be large enough to properly represent the overall slab. Check whether coverage rate is appropriate, that concrete accepts the product, and that product is reacting with slab.

**010: Pre-Application**

Advanced planning is critical to all successful concrete work, notations worth considering when using **Lythic Products**.

- Measure area (*square feet: ft<sup>2</sup> / square meter: m<sup>2</sup>*) that will require **Lythic Products**.
- Mix an appropriate quantity of **Lythic Products** for job-size, per instructions in Section 007: Mixing & Dilution, using estimated coverage rates in Section 005: Coverage Rates or the coverage chart on page 1.
- Check auto-scrubber is in optimal working condition.
- Designate trained operator(s) to apply **Lythic Products** throughout project to ensure consistent application.

**011: Application Guidelines**

**Lythic Cleaner** can be applied via auto-scrubber or hand mopping.

**011-a: Auto-scrubber**

- Dilute **Lythic Cleaner** per required ratio 32:1 or 16:1
- Refer to auto-scrubber manual for operational instructions.
- Heavy solid areas increase dwell time, or spot clean.
- Allow to dry. No floor-rinsing is required.

**011-b: Hand Mopping**

Mop applications require a separate rinse-water bucket to clean and wring mops as it applies **Lythic Cleaner**.

- Dilute **Lythic Cleaner** per required ratio 32:1 or 16:1.

- Dilute **Lythic Cleaner** per required ratio 32:1 or 16:1
- Apply one mop-load of mixed **Lythic Cleaner** evenly over the floor.
- Rinse mop in clean water and wring out before re-loading with more **Lythic Cleaner**.
- Replace clean water frequently to maintain effectiveness of cleaning.
- Allow to dry. No floor-rinsing is required.

**011-c: Spot Cleaning**

**Lythic Cleaner** is effective for spot cleaning small areas of oils and grease stains. Use full strength, undiluted **Lythic Cleaner**.

- Apply undiluted **Lythic Cleaner** to the stained area.
- Allow to dwell for 15 minutes.
- Then agitate area to remove stain.
- Repeat as necessary.
- Rinse area with clean water before cleaning overall area as normal.

**012: Limitations & Important Notes**

- **Lythic Cleaner** will not remove adhesives, mastic or other surface sealants.
- Jobsite samples are strongly recommended prior to application of all **Solomon/Brickform** and **Lythic Products**.

**013: Industry Compliance**

- VOC Compliant
- USDA-Authorized
- National Floor Safety Institute
- LEED-Green Building Rating System
- GreenSpec listed
- OSHA & ADA non-slip requirements

**LYTHIC**

# CLEANER

**014: Lythic System Products:**

- **Lythic DAY1** .....(Troweling aid)
- **Lythic Densifier** .....(Small particle densifier)
- **Lythic Densifier XL** .....(Larger particle densifier)
- **Lythic Protector** .....(Color enhancer & protector)
  
- **Lythic Cleaner** .....(Colloidal silica cleaning agent)
- **Pro-Dye** .....(Penetrating colorant concentrate)
- **Stealth Seal** .....(Penetrating sealer)
- **Solomon Colors**.....(Integral color for concrete)
- **Brickform** .....(Sealers and processes for concrete)

**HEALTH & SAFETY****015: Precautions**

**WARNING: FOR PROFESSIONAL USE ONLY.** Before using product, read product SAFETY DATA SHEET (SDS) and instructions on packaging. **ALKALINE**

**CONCENTRATE:** Contact can damage eyes, skin, and other body tissues. **HANDLE WITH CARE.** Eye and skin irritant. Digestive tract irritant; **DO NOT TAKE INTERNALLY.** **KEEP OUT OF REACH OF CHILDREN.** Spray mist is respiratory tract irritant. Use only with adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, clothing. Observe appropriate safety and jobsite controls. Wear appropriate protection including eye protection and chemical-resistant gloves. Ensure fresh air-flow during application and until dry. If you experience headaches, dizziness, eye watering, or if air monitoring shows vapor/mist levels above applicable limits, wear a properly fitted P100/organic vapor respirator (NIOSH TC-84A approved), used according to manufacturer's directions, during application and drying.

**SLIP/FALL DANGER:** During application of **Lythic Products** and until dry, treated surface will be slippery. Use extreme care when walking on wet **Lythic Products**.

**016: First Aid**

**Ingestion:** Not expected to be toxic. Never give an unconscious person anything to ingest. If swallowed, immediately give two glasses of water, seek medical attention if ill effects develop.

**Inhalation:** May cause irritation. Remove to fresh air and provide oxygen. If not breathing, give artificial respiration. Seek medical attention if irritation persists.

**Eye Contact:** Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** May cause irritation. Wash affected area with soap and water. Remove contaminated clothing and shoes. Seek medical attention if irritation persists.

**017: Physical Properties**

<b>Appearance</b> .....	<b>Red tinted liquid</b>
<b>VOC Content</b> .....	<b>&lt;10 g/l</b>
<b>Active Ingredients</b> .....	<b>100% of total solids</b>
<b>Material pH</b> .....	<b>apx 10</b>
<b>Freeze point</b> .....	<b>32°F - 0°C</b>

**018: Warranty**

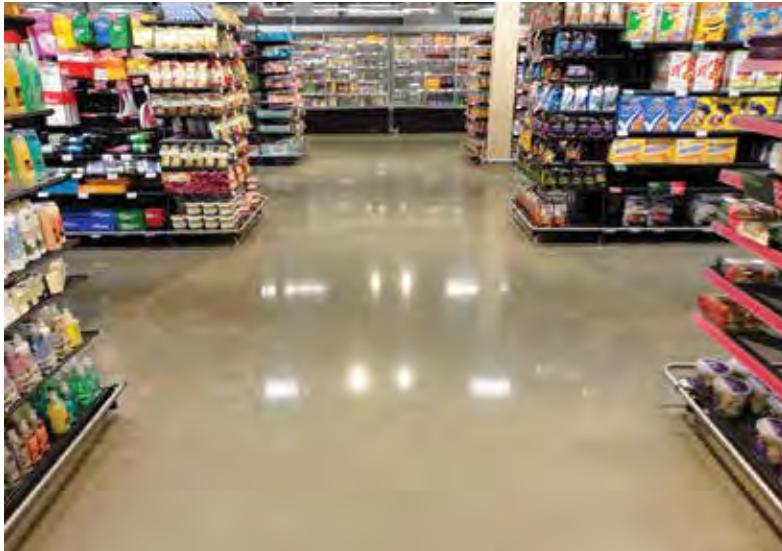
**Lythic Products** are intended for use by licensed contractors and installers, experienced and trained in the use of these types of products. It is warranted to be of uniform quality, within manufacturing tolerances. The manufacturer has no control over the use of this product, therefore, no warranty, expressed or implied, is or can be made either as to the effects or results of such use. In any case, the manufacturer's obligations shall be limited to refunding the purchase price or replacing **Lythic Products** proven defective. The end user shall be responsible for determining product's suitability and assumes all risks and liability.

**Additional Information & Technical Support:**

This document covers the basic guidelines and instructions for the use of **Lythic Products**. Further instruction or technical information related to specifying **Lythic Products** or systems are available upon request. Contact Solomon Colors or your local distributor:

# LYTHIC

## GROCERY STORE PROJECT PROFILE



### Marks & Spencer Grocery Store

**PROFILE:**  
Lythic Polished  
Concrete Products

**MATERIALS:**  
Lythic Densifier  
Lythic Protector  
Lythic Cleaner

**LOCATION:** Great Britain

**OVERVIEW:** Marks & Spencer is one of the leading grocery stores in the United Kingdom. They are well known for high quality and innovation. A nationwide initiative was undertaken to remodel the flagship locations with 100% sustainable solutions. Lythic Densifiers were used to help with the fast track schedule for polishing the floors.

Due to the 100% reactive colloidal silica, the densification is almost instant and gels within minutes, therefore no downtime during polishing. This was important to the client to ensure maximum efficiency and hardening qualities before polishing.

**PRODUCTS USED:**  
LYTHIC DENSIFIER  
LYTHIC PROTECTOR  
LYTHIC CLEANER

**LYTHIC**

# MEDICAL FACILITY

## PROJECT PROFILE



**PRODUCTS USED:**  
**LYTHIC DENSIFIER**  
**LYTHIC PROTECTOR**  
**LYTHIC CLEANER**



### Medical Facility

#### PROFILE:

Lythic Polished  
Concrete Products

#### MATERIALS:

Lythic Densifier  
Lythic Protector  
Lythic Cleaner

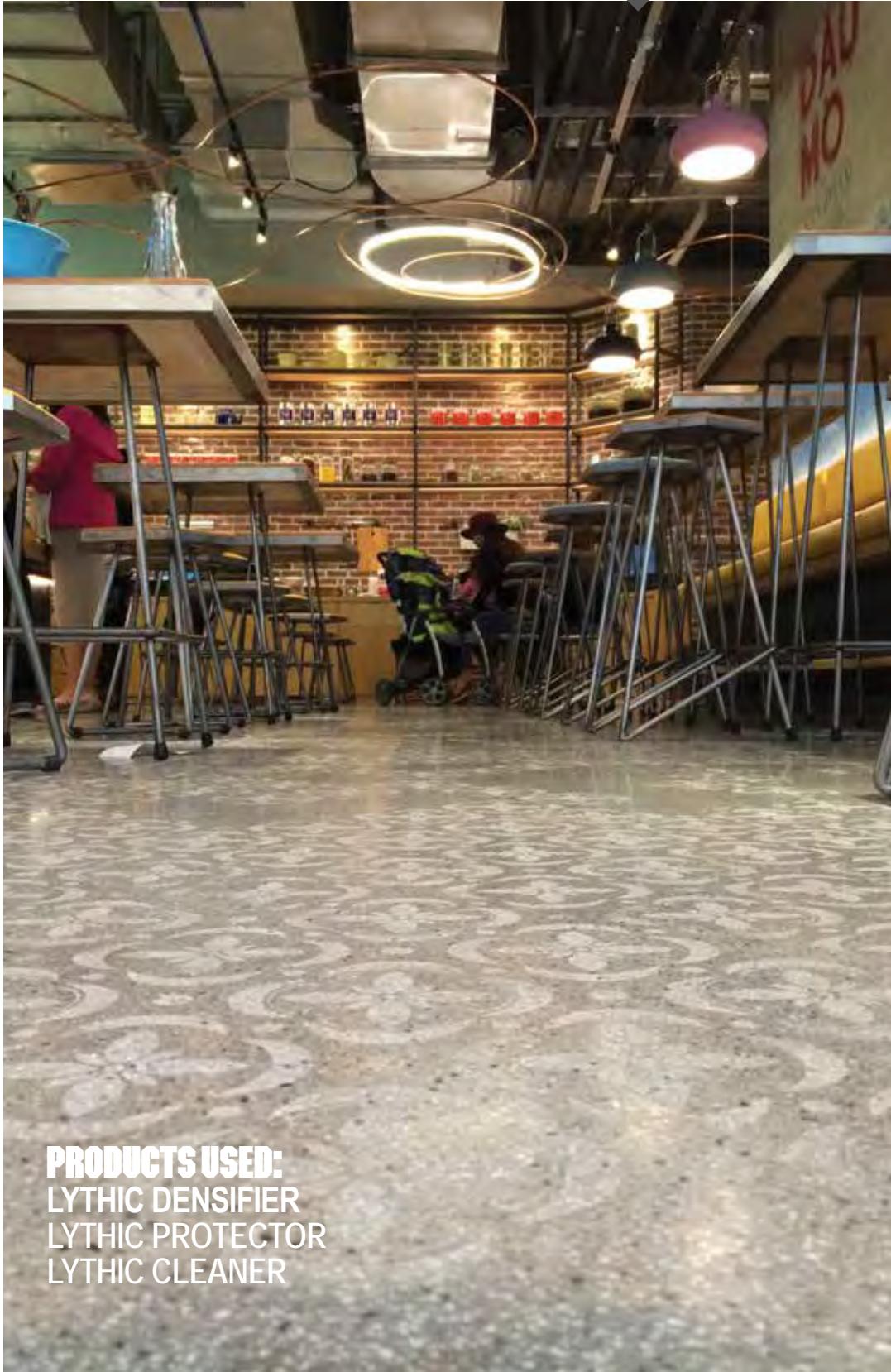
#### LOCATION: USA

**OVERVIEW:** The private medical facility was a complete retro-fit of an existing building. The existing floor was in bad condition after the VCT tile was removed. A cementitious, half-inch overlay was used to re-level the entire floor. After a complete 7-stage grind and polish, the entire Lythic polished concrete system (Densifier, Protector and Cleaner) was used.

The clients' overall expectations for flatness, gloss and reflectivity were exceeded. The basic maintenance program of daily cleaning with Lythic Cleaner and weekly high-speed burnish is all that is needed to keep this floor servicing the medical facility for years to come.

**LYTHIC**

# FAST FOOD RESTAURANT PROJECT PROFILE



## Noodle Bar Fast Food Outlet

**PROFILE:**

Lythic Polished Concrete Products

**MATERIALS:**

Lythic Densifier

Lythic Protector

Lythic Cleaner

**LOCATION:** China

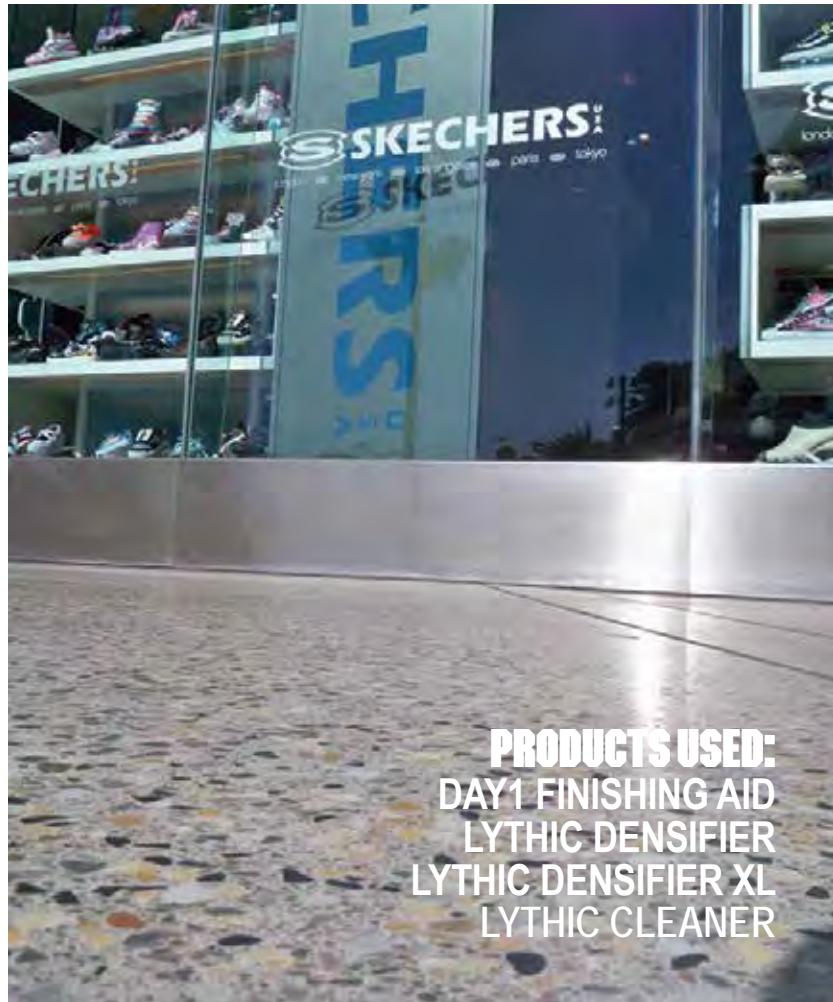
**OVERVIEW:** The design team for the Noodle Bar required function, durability, and low maintenance in addition to creating a floor that did not look too industrial. They wanted people to feel comfortable during the eating experience.

The floor was highly polished using Lythic Densifier. Afterwards, a template was placed over the entire floor, which allowed the design to be sand-blasted with a light etch. When the template was removed, the floor was cleaned and sealed with Lythic Protector. General cleaning is completed daily with Lythic Protector and a high-speed burnish.

**PRODUCTS USED:**  
**LYTHIC DENSIFIER**  
**LYTHIC PROTECTOR**  
**LYTHIC CLEANER**

**LYTHIC**

# RETAIL STORE PROJECT PROFILE



## Skechers Retail Store

**PROFILE:**

Lythic Polished Concrete Products

**MATERIALS:**

DAY1 Finishing Aid  
Lythic Densifier  
Lythic Densifier XL  
Lythic Cleaner

**LOCATION:** USA

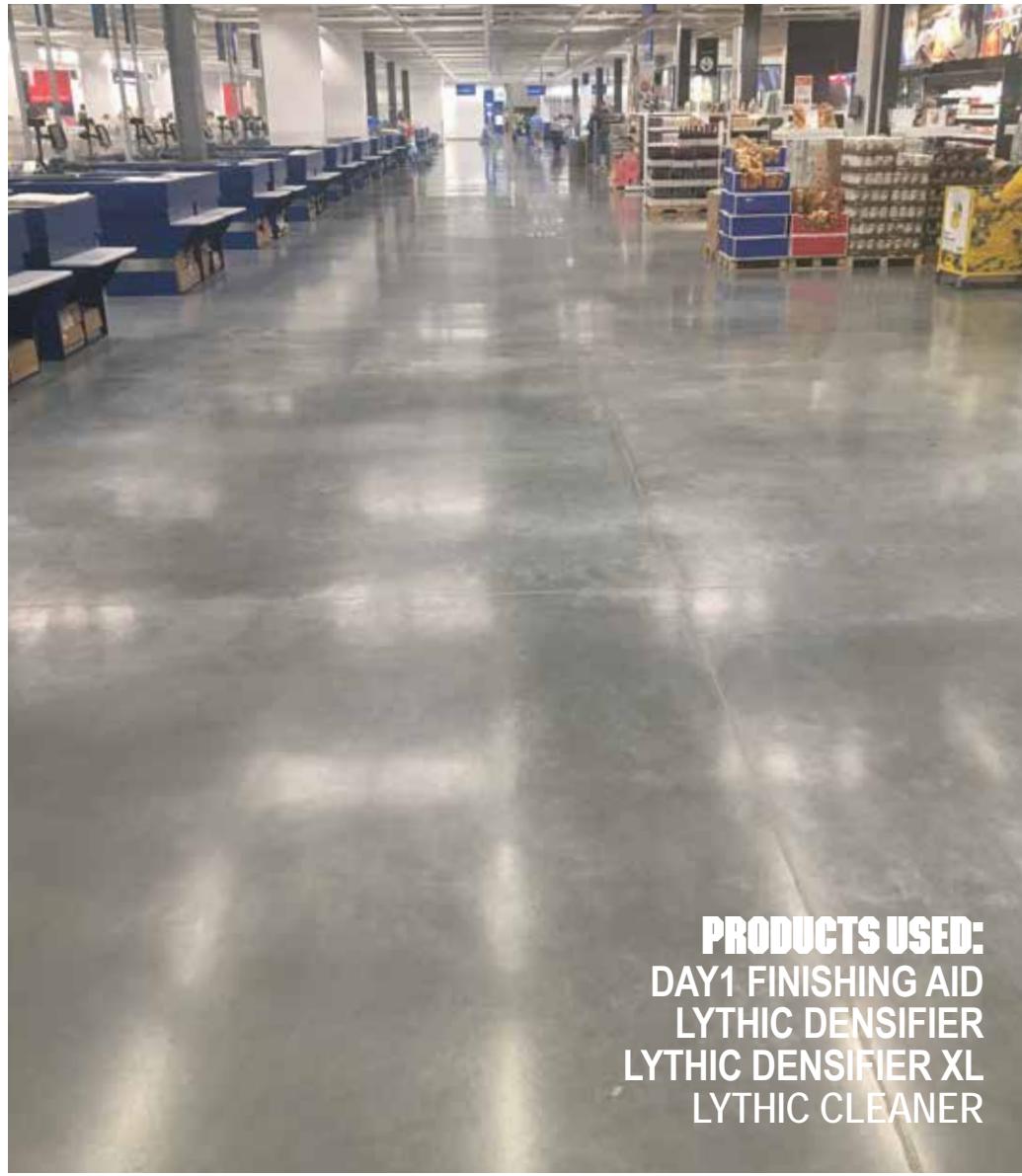
**OVERVIEW:** The exterior of the strip mall was designed to have an exposed aggregate finish. After seeing samples of a heavy grind, the architect decided a ground, exposed finish would be easier to maintain than a chemically-exposed surface.

The paved area was ground to a 120 grit metal diamond with minimal scratch pattern. DAY1 Finishing Aid was used during concrete placement, adding silica to the finish. During the grinding stages, Lythic Densifier was used for additional hardening. To increase slip resistance and stain protection, Lythic Protector was applied.

**PRODUCTS USED:**  
**DAY1 FINISHING AID**  
**LYTHIC DENSIFIER**  
**LYTHIC DENSIFIER XL**  
**LYTHIC CLEANER**

# LYTHIC

# WAREHOUSE PROJECT PROFILE



**PRODUCTS USED:**  
**DAY1 FINISHING AID**  
**LYTHIC DENSIFIER**  
**LYTHIC DENSIFIER XL**  
**LYTHIC CLEANER**

## IKEA Store

### PROFILE:

Lythic Polished Concrete Products

### MATERIALS:

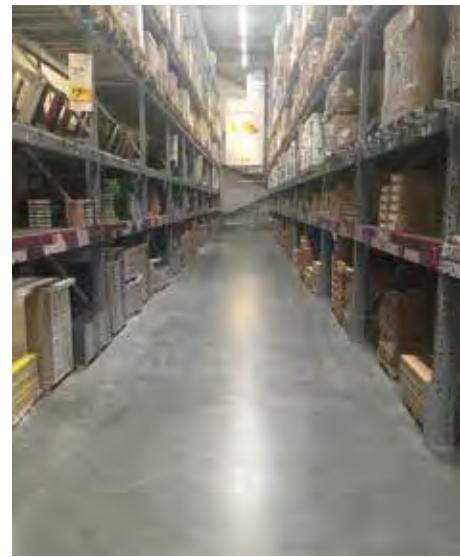
DAY1 Finishing Aid  
Lythic Densifier  
Lythic Densifier XL  
Lythic Cleaner

### LOCATION:

Australia

**OVERVIEW:** IKEA is one of the original European companies who engaged with polished concrete in the early 90s. With stores worldwide, they have a vast understanding of what to expect from a polished concrete floor. Lythic Solutions is working at multiple levels throughout the IKEA contracting stages to continue the high standards the stores expect.

Retro polishing many of the old stores is part of the fast-track features Lythic Densifiers offer as a solution. The quick reactive time of the pure silica reduces the number of hours needed for dwell time traditional silicates need. Big brands can count on Lythic performance.



**LYTHIC**

# COFFEE HOUSE OUTLET

## PROJECT PROFILE



**PRODUCTS USED:**  
**LYTHIC XL DENSIFIER**  
**LYTHIC PROTECTOR**  
**LYTHIC CLEANER**

### Starbucks

**PROFILE:**

Lythic Polished Concrete Products

**MATERIALS:**

Lythic Densifier XL

Lythic Protector

Lythic Cleaner

**LOCATION:** China

**OVERVIEW:** Starbucks is rapidly expanding into the Chinese market, opening flagship stores in multiple major cities or close to tourist attractions like this location, new Disneyland Shanghai. No expense was spared on the fixtures and fittings.

This Starbucks floor used a polishable overlay with locally-sourced white marble chips revealed by heavy grinding. Lythic XL Densifier was used to harden the floor before polishing up to a 400 grit honed finish. Three coats of Lythic Protector were used with a white pad high-speed burnish. Lythic Cleaner is used for daily maintenance.

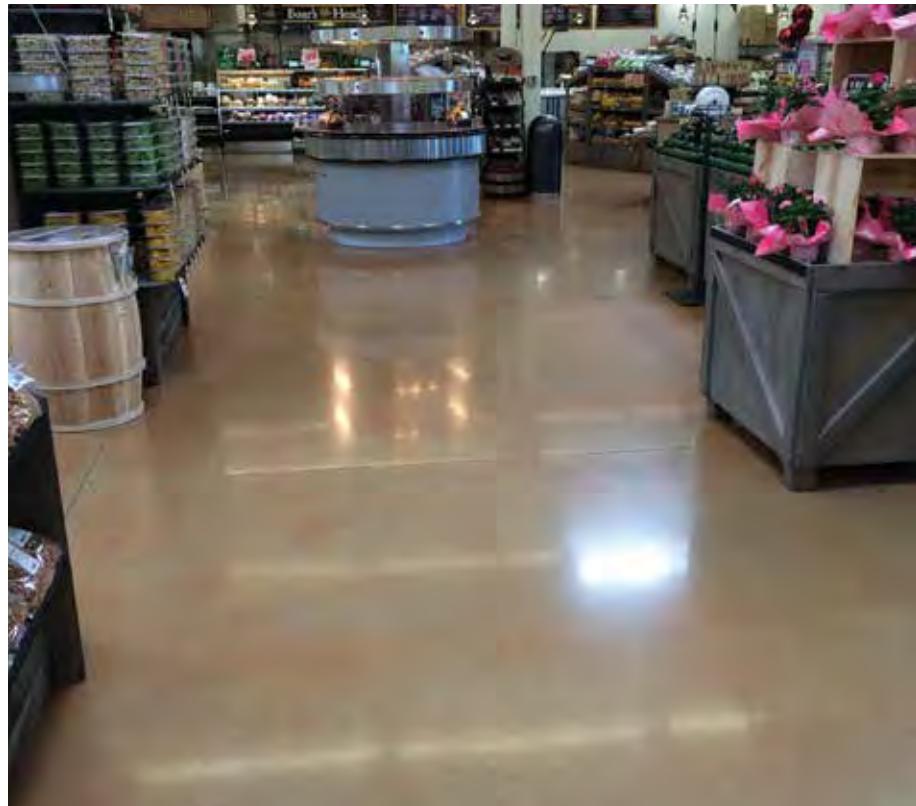


**LYTHIC**

# GROCERY STORE PROJECT PROFILE



**PRODUCTS USED:**  
**LYTHIC PRO-DYE**  
**LYTHIC DENSIFIER**  
**LYTHIC PROTECTOR**  
**LYTHIC CLEANER**



## Fresh & Thyme Farmers Market

**PROFILE:**  
Lythic Polished Concrete Products

**MATERIALS:**  
Lythic Pro-Dye  
Lythic Densifier  
Lythic Protector  
Lythic Cleaner

**LOCATION:** United States

**OVERVIEW:** During the construction stages, the owners decided they did not like the uncolored floor as it looked too industrial. After multiple samples, Lythic Pro-Dye was chosen to add color during the polishing stages. The floor was densified using Lythic Densifier, both before and after the Lythic Pro-Dye to lock in the color. Lythic Protector was used as final protection for the floor, which is cleaned daily with Lythic Cleaner and buffed dry.

**LYTHIC**

# OFFICE SPACE PROJECT PROFILE

## Ziba Design

**PROFILE:**

Lythic Polished Concrete Products

**MATERIALS:**

Lythic Densifier  
Lythic Protector  
Lythic Cleaner

**LOCATION:** United States & Japan

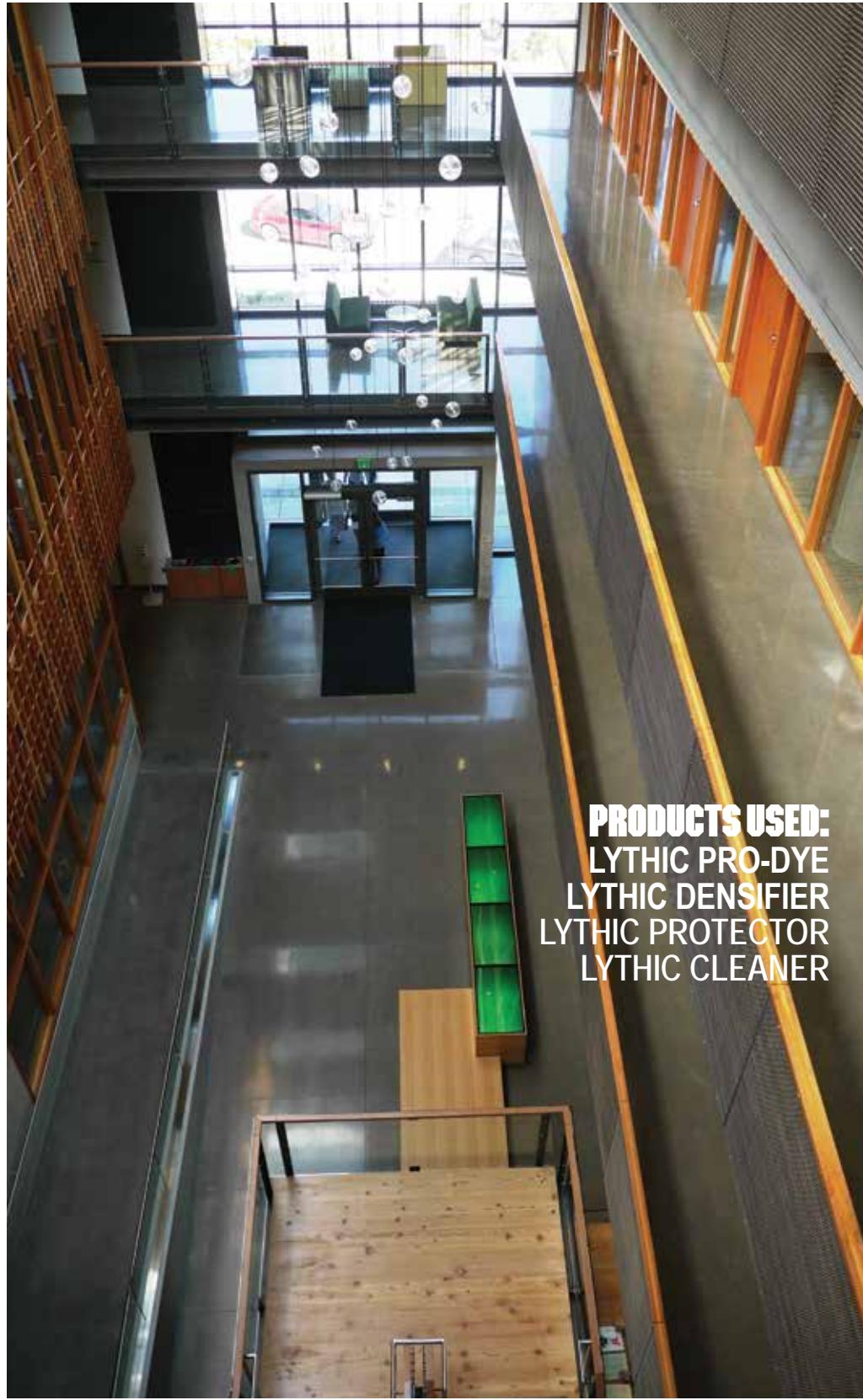
**OVERVIEW:** Ziba is a design firm specializing in contemporary and ergonomic design. Big-box brands to new company startups work with Ziba for their imaging, designs and concepts. The floor needed to reflect the clean-cut image of the company. Polished concrete complimented the artistic surroundings. Many clients have commented on the floor when they visit their offices.



**PRODUCTS USED:**  
**LYTHIC PRO-DYE**  
**LYTHIC DENSIFIER**  
**LYTHIC PROTECTOR**  
**LYTHIC CLEANER**

**LYTHIC**

# EDUCATIONAL FACILITY PROJECT PROFILE



## University Alumni Center

**PROFILE:**

Lythic Polished Concrete Products

**MATERIALS:**

Lythic Densifier  
Lythic Protector  
Lythic Cleaner

**LOCATION:** United States

**OVERVIEW:** The university was an LEED gold project. The Alumni Center receives over 30,000 visitors on tour programs each year, in addition to the students who walk the halls and use the facilities daily. A durable, dust-free, polished concrete floor that offers low maintenance and function exceeded the expectations of the client.

The floor is cleaned daily with an auto scrubber and Lythic Cleaner to ensure a long service life for years to come.



**LYTHIC**

# RESTAURANT PROJECT PROFILE



## Restaurant

**PROFILE:**

Lythic Polished Concrete Products

**MATERIALS:**

Tru Polishable Overlay  
Brickform Liquid Colorants  
Lythic Densifier  
Lythic Cleaner

**LOCATION:** United States

**OVERVIEW:** The architect selected an overlay to ensure a consistent finish throughout the entire restaurant. The overlay was colored using Brickform liquid colorants. The floor was mechanically ground to a 200 grit resin diamond finish, with Lythic Densifier used to harden the floor, and Lythic Protector to resist staining. The floor is cleaned with Lythic Cleaner on a daily basis.



# LYTHIC

# RETAIL STORE PROJECT PROFILE



## Under Armor Retail Store

**PROFILE:**

Lythic Polished Concrete Products

**MATERIALS:**

Lythic Densifier

Lythic Protector

Lythic Cleaner

**LOCATION:** China

**OVERVIEW:** Under Armour is rapidly expanding with retail outlets across the world. The bold, dynamic store designs are aimed to keep visitors entrenched in the shopping experience. At the same time, functionality is one of the main design features of the flooring requirements. Long-term durability and ease of maintenance were reasons for selecting polished concrete.

Lythic Polished Concrete Products offer a complete flooring solution with unique colloidal silica technology. The 100% reactive silica ensures the concrete is chemically hardened prior to the mechanical polishing process. More UA stores are to be polished with Lythic technology.

**PRODUCTS USED:**  
**LYTHIC DENSIFIER**  
**LYTHIC PROTECTOR**  
**LYTHIC CLEANER**



**LYTHIC**

# OFFICE SPACE PROJECT PROFILE



**PRODUCTS USED:**  
**LYTHIC DENSIFIER**  
**LYTHIC PROTECTOR**  
**LYTHIC CLEANER**

## Dunelm Mills Corporate Office

**PROFILE:**

Lythic Polished Concrete Products

**MATERIALS:**

Lythic Densifier  
Lythic Protector  
Lythic Cleaner

**LOCATION:** Great Britain

**OVERVIEW:** Dunelm Mills is a homeware retailer across the UK with over 100 stores. The new head office facility was inspired by sustainable construction methods. Polished concrete was one of three flooring finishes presented to the client. After a lifecycle cost analysis was broken down, polished concrete was the clients preferred choice. The floor was cut back to reveal small to medium



size aggregate. Then Lythic Densifier was used to harden the concrete before the final polishing stages. Lythic Protector was applied to help resist stains and increase traction when wet. The Lythic Cleaner is used daily to maintain the shine and keep the surface to the clients satisfaction.



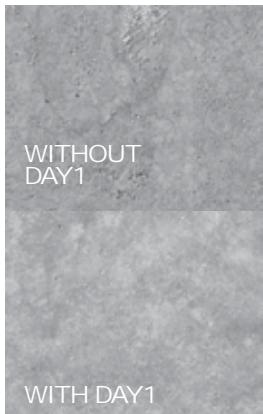
CONCENTRATE & READY-TO-USE FORMULA



DAY1 FINISHING AID is a colloidal silica-based topical additive that makes concrete flatwork finishing easier and faster. It produces a better result and reduces the risk of a prematurely setting slab. Applied during floating and troweling, DAY1 increases cream, making for easier, better finishing and extended workable time under adverse conditions. DAY1 does not alter the water to cement ratio. It provides moisture-retention performance similar to a liquid membrane forming curing compound. DAY1, however, becomes a permanent part of the slab so there is no membrane or residue to remove.

DAY1 also has a number of densification and performance enhancing qualities. Through densification, compressive and surface abrasion resistance are improved. Additionally, DAY1 improves consolidation, reduces water vapor transmission, and extends curing, further improving strength and durability. DAY1 has been shown to successfully mitigate slab curling by reducing evaporation at the surface, thereby diminishing the shrinkage differential and the curling it causes. DAY1 also minimizes the potential for checking, crazing, and other drying-related surface issues.

DAY1 reduces the potential for efflorescence on both colored and non-colored concrete mixes. It also gives the concrete surface hydrophobic-like properties for better resistance to liquid penetration and staining. This makes it a must-have for any colored or decorative concrete project.



DAY1 offers a multitude of advanced features and benefits for freshly-placed concrete, and provides long-term high performance properties to treated concrete surfaces:

#### FINISHING AID

- **Designed to improve workability under hot, dry, & windy conditions & will save a slab**
- Reduces operator fatigue and trowel wear
- Aids application of shake-on hardeners in low bleedwater environments
- Helps finish high performance concretes
- Concentrate and ready-to-use formulas

#### HARDENING & DENSIFICATION

- Increases abrasion & impact resistance
- Increases surface compressive strength
- Creates a denser, less-permeable surface for resistance to liquid penetration

#### CONCRETE CURING

- Retains moisture in the slab during curing
- Reduces water vapor transmission (MVER)
- Mitigates volume of water vapors

#### EFFLORESCENCE & SURFACE DEFECT

- Reduces calcium hydroxide  $\text{Ca(OH)}_2$  migration
- Reduces efflorescence on both colored & non-colored concrete
- Minimizes checking, crazing & scaling
- Decreases potential for alkali silica reaction (ASR)
- Ideal for all colored and decorative concrete applications

#### CURLING REDUCTION

- Reduces potential for slab curling





CONCENTRATE & READY-TO-USE FORMULA





CONCENTRATE & READY-TO-USE FORMULA

### 001: Product Description

**DAY1** is a colloidal silica finishing aid that lubricates the surface for faster, easier finishing. **DAY1** extends workable time under adverse conditions such as high wind, heat, or low humidity. **DAY1** eliminates the need to add water to the surface which can be detrimental to the surface performance of the slab. It can also be used to help finish shake-on hardeners in low bleedwater environments. Concrete with high cement, air, silica fume, or silica flower are easier to finish when **DAY1** is applied.

Colloidal silica is at the heart of **DAY1** technology. The amorphous silica reacts during the hydration of concrete to produce more cementitious material, translating into higher density and improved surface performance.

**DAY1**, applied during finishing, provides a number long-term of benefits to cured concrete. **DAY1** reduces surface evaporation, mitigating and reducing ASR, slab curling, and differential shrinkage. **DAY1** also has densification properties to prevent dusting and reduces efflorescence in colored and standard concrete.

### 002: Features & Advantages

- Lubricates for more efficient surface finishing
- Reduces operator fatigue and trowel wear
- Extends workability under hot, dry, and windy conditions
- Aids application of shake-on hardeners
- Reduces efflorescence with colored & standard concrete
- Minimizes checking, crazing & scaling
- Hardens and densifies
- Increases impact and abrasion resistance
- Creates a less permeable surface
- Increases surface compressive strength by 20%-30%
- Reduces water vapor transmission \*(MVER)
- **Reduces calcium hydroxide Ca(OH)<sub>2</sub> migration**
- Decreases potential for alkali silica reaction - \*(ASR)
- Reduces potential for slab curling
- Concentrate and Ready-to-Use Formulas
- Will not increase the W/C ration
- Does not affect or change color

### 003: Sustainability

**DAY1** increases the durability and performance of a concrete surface, extending its service life and minimizes material and energy consumption for its replacement.

- South Coast Air Quality Management District compliant
- Zero-VOC formula
- Ships as concentrate to lower environmental impact
- Reduces shipping and storage costs
- No hazardous waste created
- Qualifies for LEED credits

### 004: Materials Packaging

#### **DAY1 Concentrate 4:1**

(Gold **DAY1** Logo)

- 1 gallon / 3.78 liter jug
- 5 gallon / 19 liter pail
- 55 gallon / 208 liter drum
- 270 gallon / 1021 liter tote (IBC)



\*Note the concentrated product will yield 5 times the volume when mixed 4:1 with clean potable water.

#### **DAY1 Reay-to-Use**

(Green **DAY1** Logo)



- 1 gallon / 3.78 liter jug
- 5 gallon / 19 liter pail
- 55 gallon / 208 liter drum
- 270 gallon / 1021 liter tote (IBC)

### 005: Coverage Rates

**DAY1** will yield different results based on the jobsite conditions and usage demands. Before floating or troweling, test **DAY1** on a sample section to determine appropriate application rate and technique before applying to entire project area.

*\*(See Section 009: Project Testing)*

Use these coverage rates as a starting point to determine necessary application rate. Coverages are based on a mixed ready-to-use (RTU) gallon of **DAY1**. **DAY1** can be applied at multiple stages during finishing.

Application Needs	Coverage Rate (US, per gallon)	Coverage Rate (Metric, per liter)
Finishing Aid	500 - 1000 ft <sup>2</sup>	12 - 24 m <sup>2</sup>
Performance Concrete	250 - 500 ft <sup>2</sup>	6 - 12 m <sup>2</sup>



CONCENTRATE & READY-TO-USE FORMULA

#### 006: Storage & Shelf Life

DAY1 should be kept in the original container when possible with the lid fastened tightly. DAY1 has an optimized shelf life of 24 months from the date of manufacture.

- Keep in a dry place.
- Temp range of 40-100°F or 4-38°C.
- Do not allow to freeze.

#### MIXING & APPLICATION

##### 007: Mixing & Dilution

DAY1 is available in two concentrations. Consult the package label to ensure correct mixing and usage.



(Gold DAY1 Logo) is shipped and packaged in concentrate formula. Before use, it must be diluted with clean potable water, 4:1.

- 1) Before opening, agitate DAY1 concentrate.
- 2) Use clean potable water to mix with DAY1.
- 3) Mix in container or directly into sprayer.
- 4) Ratio: one part DAY1 to four parts water.
- 5) Mix, agitate or stir well.
- 6) Pour DAY1 directly into sprayer.



(Green DAY1 Logo) is shipped and packaged in Ready-to-Use formula requiring no mixing.

- 1) Before opening, agitate DAY1 Ready-to-Use.
- 2) Pour DAY1 RTU directly into sprayer.

#### 008: Equipment

Apply DAY1 using a low-pressure pump sprayer. Use either a fan tip or a cone tip for even spraying. Automatic low pressure sprayers can also be used for larger projects. DAY1 can also be applied through the water tanks of a ride-on trowel.

#### 009: Project Testing

Every batch of concrete is unique and its behavior varies depending on surrounding conditions. Testing is only relevant on the actual batch being finished. At the

beginning of floating, and again at the beginning of troweling, test DAY1 on a small sample section to verify needed application rate and technique.

#### 010: Pre-Application

Advanced planning is critical to all successful concrete work. Notations worth considering when using DAY1:

- Mix enough DAY1 concentrate into RTU for the project.
- Check spraying equipment is in working order.
- Protect adjacent areas that do not require DAY1.

#### 011: Application Guidelines

DAY1 is designed to be used during the floating and troweling stages of concrete placement. Multiple applications can be applied as needed throughout the finishing process. There are two uses for DAY1. The first is as a finishing aid to help concrete placement crews deliver a smooth, flat finish. The second is to increase the overall performance of the concrete surface.

##### 001-a: Finishing Aid

DAY1 should be applied when needed to help finish concrete. Applied at an average rate of 500 to 1000 ft<sup>2</sup>/gal per application and worked in to the concrete by floating or finishing either by hand or mechanical trowels.

Multiple applications can be used throughout the finishing process. Do not exceed 250 ft<sup>2</sup>/gal per application. Typically, 1, 2 or 3 applications worked into the concrete will provide high levels of finishing.

##### 011-b: Performance Concrete

The term performance concrete refers to the chemical enhancements of the surface. Although the finishing applications will add to some of the overall performance, it is important to apply DAY1 early to maximize the chemical interaction.

Applying DAY1 at the first bull float or mechanical trowel stage at a rate of 250 ft<sup>2</sup>/gal ensures the colloidal silica is worked deeply into the cement matrix. Then use DAY1 when, or as needed to help finish the slab. See section 011a: Finishing Aid.



CONCENTRATE & READY-TO-USE FORMULA

#### 011-c: General Application

- 1) Dilute **DAY1** according to instructions in Section 007: Mixing & Dilution before use.
- 2) Pour **DAY1** RTU mixture into sprayer. Keep the sprayer at optimized levels, allowing even distribution when applying to concrete surface. Or pour into the water tanks on the ride-on trowel.
- 3) Spray apply to concrete surface during floating or troweling at the predetermined application rates.
- 4) Float or trowel surface. **DAY1** must be worked into the surface of the concrete immediately after application. Full benefit will not be realized if **DAY1** is allowed to dry prior to being worked into surface. Finisher should determine when additional **DAY1** is needed to improve workability.

It is recommended to apply **DAY1** throughout the entire project for most consistent results. **DAY1** can be applied both before and after the application of dry-shake hardeners/color hardeners, and may be especially useful when there is a limited amount of bleed-water to wet-out the powdered hardeners.

#### 012: Limitations & Important Notes

- **DAY1** reduces porosity of the concrete surface, but should not be confused with concrete sealers; it will not seal or prevent staining.
- **DAY1** must be floated or troweled into the concrete immediately after application and not allowed to puddle or pond on the surface.
- **DAY1** reduces moisture vapor emissions and will aid curing. **DAY1** is not a membrane-forming curing compound. **DAY1** is not a replacement for specified curing compounds.
- Do not exceed 200 sf<sup>2</sup>/gal in a single application. Make sure to thoroughly work in each application of **DAY1** before additional **DAY1** is applied.
- Jobsite samples are strongly recommended prior to application of all **Solomon/Brickform** and **Lythic** products.

#### 013: Industry Compliance

- VOC Compliant
- USDA-Authorized
- National Floor Safety Institute
- LEED-Green Building Rating System
- GreenSpec listed
- NSF Certified



#### 014: Lythic System Products:

- **DAY1** .....(Troweling aid)
- **Lythic Densifier** .....(Smaller particle densifier)
- **Lythic Densifier XL** .....(Larger particle densifier)
- **Lythic Protector** .....(Color enhancer & protector)
- **Lythic Cleaner** .....(Colloidal silica cleaning agent)
- **Pro-Dye** .....(Penetrating colorant concentrate)
- **Stealth Seal** .....(Penetrating sealer)
- **Solomon Colors** .....(Integral color for concrete)
- **Brickform** .....(Sealers and processes for concrete)

#### HEALTH & SAFETY

##### 015: Precautions

**WARNING: FOR PROFESSIONAL USE ONLY.** Before using product, read product SAFETY DATA SHEET (SDS) and instructions on packaging. **ALKALINE CONCENTRATE:** Contact can damage eyes, skin, and other body tissues. **HANDLE WITH CARE.** Eye and skin irritant. Digestive tract irritant; **DO NOT TAKE INTERNALLY.** **KEEP OUT OF REACH OF CHILDREN.** Spray mist is a respiratory tract irritant. Use only with adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, clothing. Observe appropriate safety and jobsite controls. Wear appropriate protection including eye protection and chemical-resistant gloves. Ensure fresh air-flow during application and until dry. If you experience headaches, dizziness, eye watering, or if air monitoring shows vapor/mist levels above applicable limits, wear a properly fitted P100/organic vapor respirator (NIOSH TC-84A approved), used according to manufacturer's directions, during application and drying. **SLIP/FALL DANGER:** During application of **DAY1** and until dry, treated surface will be slippery. Use extreme care when walking on wet **DAY1**.



CONCENTRATE & READY-TO-USE FORMULA

**Inhalation:** May cause irritation. Remove to fresh air and provide oxygen. If not breathing, give artificial respiration. Seek medical attention if irritation persists.

**Eye Contact:** Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** May cause irritation. Wash affected area with soap and water. Remove contaminated clothing and shoes. Seek medical attention if irritation persists.

#### 017: Physical Properties

Appearance .....	Milky white tinted liquid
VOC content.....	<0 g/l (Low- VOC)
Active ingredients.....	100% of total solids
Material pH .....	apx 9-9.5
Freeze point .....	32°F - 0°C

#### 018: Warranty

**Solomon Colors / Lythic** products are intended for use by licensed contractors and installers, experienced and trained in the use of these types of products. It is warranted to be of uniform quality, within manufacturing tolerances. The manufacturer has no control over the use of this product, therefore, no warranty, expressed or implied, is or can be made either as to the effects or results of such use. In any case, the manufacturer's obligations shall be limited to refunding the purchase price or replacing Lythic products proven defective. The end user shall be responsible for determining product's suitability and assumes all risks and liability.

#### Additional Information & Technical Support:

This document covers the basic guidelines and instructions for the use of Lythic products. Further instruction or technical information related to specifying Lythic products or systems are available upon request. Contact Solomon Colors or your local distributor.

