



SPECIALTY
PRODUCTS
GROUP

VAPOR LOCK™ 1L First Day

Finishing Aid, Sealer and Densifier

DESCRIPTION

Vapor Lock™ 1L First Day Finishing Aid, Sealer and Densifier is an advanced colloidal silica treatment engineered specifically to solve modern 1L cement finishing and durability problems in newly placed concrete. Designed for application during concrete placement and finishing operations, Vapor Lock™ 1L First Day improves workability, finishing characteristics, surface performance, and long-term durability.

Modern concrete mixes, using 1L cement, often present difficult finishing conditions due to higher water demand and aggressive environmental conditions such as wind, heat, and low humidity. Vapor Lock™ 1L First Day is formulated to help concrete crews manage these conditions while producing stronger, denser, and more durable slab surfaces.

Unlike the practice of adding water during finishing, Vapor Lock™ 1L First Day improves workability without increasing the water-to-cement ratio or weakening the concrete surface. The technology lubricates the slab surface to support smoother floating and troweling operations while helping reduce surface defects commonly associated with modern 1L cement systems.

The colloidal silica chemistry in Vapor Lock™ 1L First Day reacts within the concrete matrix during hydration to generate additional calcium silicate hydrate (C-S-H) structure in the slab surface. This reaction contributes to increased surface density, improved abrasion resistance, reduced permeability, improved moisture resistance, and enhanced long-term durability while maintaining the natural appearance of the concrete.

Although Vapor Lock™ 1L First Day is optimized for freshly placed concrete, it may also be used as a penetrating densifier and conditioning treatment for existing concrete surfaces where increased durability and reduced dusting are desired.

BASIC USES

Vapor Lock™ 1L First Day is primarily designed for newly placed concrete to solve common 1L cement finishing and performance problems while improving long-term slab durability. The product functions as a finishing aid, densifier, curing enhancer, and breathable conditioning treatment during concrete placement and finishing operations.

Primary applications include:

- New concrete slabs experiencing difficult finishing conditions
- High-performance concrete with low bleed water
- Concrete containing silica fume, fly ash, or high cement content
- Industrial floors and warehouse slabs
- Decorative and colored concrete
- Concrete receiving dry-shake hardeners
- Interior and exterior slab-on-grade applications
- Concrete requiring improved abrasion and moisture resistance

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PRODUCTS
GROUP

- Concrete requiring reduced dusting and improved surface density
- Pre-treatment for additional Vapor Lock™ systems

Secondary applications include:

- Existing concrete requiring densification and surface conditioning
- Concrete surfaces requiring reduced dusting and improved durability

MAJOR ADVANTAGES OF VAPOR LOCK™ 1L First Day

- Helps solve difficult 1L cement finishing conditions
- Improves slab workability without adding water
- Reduces rapid surface drying during finishing
- Extends finishing time in hot, dry, or windy environments
- Helps reduce finishing defects associated with modern concrete mixes
- Improves trowel movement and finishing efficiency
- Reduces operator fatigue and finishing equipment wear
- Assists incorporation of dry-shake hardeners and surface treatments
- Increases concrete density and surface hardness
- Enhances abrasion and impact resistance
- Reduces moisture intrusion and water vapor transmission
- Helps mitigate surface checking, crazing, scaling, and dusting
- Reduces efflorescence in standard and colored concrete
- Improves resistance to freeze-thaw cycling and de-icing salts
- Assists in reducing ASR-related deterioration
- Helps reduce slab curling and differential shrinkage
- Produces a breathable treated surface
- Improves adhesion of coatings and toppings
- Permanent treatment that does not require reapplication
- UV stable
- Solvent-free, odor-free, non-toxic, and non-flammable
- VOC compliant
- Will not increase the water-to-cement ratio
- Does not discolor or alter concrete appearance





SPECIALTY
PRODUCTS
GROUP

TECHNICAL AND PRODUCT DATA

Vapor Lock™ 1L First Day penetrates deeply into the capillaries of concrete and reacts with hydrated cement compounds to form a breathable, densified barrier that improves long-term durability without changing the appearance of the concrete surface.

TECHNICAL & PRODUCT DATA

- Number of Components: One
- Appearance: Clear Translucent
- Packaging: 5 US gal pails & 55 US gal drums
- Pot Life: Indefinite
- Shelf Life: 12 months at 41-75°F (5-24°C)
- VOC Content: <0 g/L
- Flash Point: None
- Material pH: Approx. 9.0 -9.5
- Freeze Point: 32°F (0°C)
- Clean-up: Water



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PRODUCTS
GROUP

COVERAGE

Coverage rates will vary based on substrate porosity, jobsite conditions, and application requirements.

Application Type	Coverage Rate (US)	Coverage Rate (Metric)	Notes
Finishing Aid	300 - 500 ft ² /gal	7.36- 12.3 m ² /L	Applied at same time as bull floating concrete
2 Coat Performance Concrete	200 - 300 ft ² /gal	6 - 30 m ² /L	First Coat with bull float Second Coat as part of final finishing

For maximum densification and chemical resistance, additional applications may be applied until surface saturation is achieved.

MIXING & APPLICATION

Equipment

Apply Vapor Lock™ 1L First Day using a low-pressure pump sprayer with a fan or cone tip for even distribution. Automatic low-pressure sprayers may be used for larger projects. Product may also be introduced through ride-on trowel water tanks.

Application Guidelines

Vapor Lock™ 1L First Day is designed for use during floating and troweling stages of concrete placement and may also be applied to cured concrete surfaces.

Multiple applications may be applied throughout the finishing process as needed.

Finishing Aid Application

Apply Vapor Lock™ 1L First Day as needed during finishing operations at an average rate of 300 to 500 ft²/gal per application and immediately work the material into the concrete surface by hand or mechanical floating and troweling.

Do not exceed 500 ft²/gal in a single application. Typically, one to three applications worked into the concrete surface will provide optimal finishing characteristics.

Performance Concrete Application

To maximize densification and long-term surface performance, apply Vapor Lock™ 1L First Day during the first bull float or mechanical trowel stage at approximately 250 ft²/gal. Work the material deeply into the concrete matrix.



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SPECIALTY
PRODUCTS
GROUP

Subsequent applications may be used as needed during finishing.

Existing Concrete Application

Although Vapor Lock™ 1L First Day is primarily intended for new concrete placement and finishing operations, it may also be applied to existing concrete surfaces requiring densification, reduced dusting, and improved surface conditioning.

Existing concrete surfaces should be clean, absorptive, and free from contaminants or coatings that may interfere with penetration. Vapor Lock™ 1L First Day must penetrate the substrate to be effective.

General Application Instructions

1. Mix or agitate product thoroughly before use and maintain agitation during application.
2. Do not thin unless specifically directed.
3. Spray apply evenly to the concrete surface.
4. Immediately float or trowel the product into the concrete surface.
5. Do not allow material to puddle or pond.
6. Additional applications may be applied as required to improve workability or increase performance.
7. For best results, apply uniformly across the entire project.

SPECIAL HANDLING

- Do not spray or allow overspray on glass or aluminum as etching may occur.
- Immediately rinse accidental overspray from adjacent surfaces.
- Do not allow product to puddle or pond on the surface.
- Do not apply during freezing conditions or when rain is imminent.
- Do not apply over standing water.
- Do not allow product to freeze.
- Do not use material that has been previously frozen.
- Tilt-up slabs or stacked precast elements treated with Vapor Lock™ 1L may bond together unless a bond breaker is applied.

LIMITATIONS

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SPECIALTY
PRODUCTS
GROUP

- Vapor Lock™ 1L First Day reduces surface porosity but should not be considered a film-forming sealer.
- Product must be floated or troweled into the surface immediately after application.
- Vapor Lock™ 1L First Day assists curing but is not intended to replace specified curing compounds.
- Jobsite testing and mock-ups are strongly recommended prior to application.

SUSTAINABILITY

Vapor Lock™ 1L First Day improves concrete durability and service life, reducing material consumption and replacement frequency.

- VOC compliant
- Zero-VOC formulation
- No hazardous waste generated
- Qualifies for LEED credits
- Reduces maintenance and lifecycle costs

SAFETY

WARNING: FOR PROFESSIONAL USE ONLY.

Before use, read the Safety Data Sheet (SDS) and all packaging instructions. Avoid contact with eyes and skin. Use appropriate personal protective equipment including gloves and eye protection. Use only with adequate ventilation.

Slip/Fall Hazard: Treated surfaces may become slippery during application until dry.

First Aid

Refer to SDS at www.spggogreen.com

WARRANTY DISCLAIMER

The information herein is intended to assist customers with product selection and application. Users are responsible for determining suitability for their intended use. Trial applications and test sections are strongly recommended.

We warrant that our products will meet written specifications. No other warranties, expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made. The exclusive remedy for proven claims is replacement of defective material. In no event shall the manufacturer be liable for incidental or consequential damages.

Project-specific warranties may be available upon request.

