

TDS AND APPLICATION

DESCRIPTION: MoistureShield™ with InnerCrete™ Technology:

MoistureShield™

A simple spray-on solution that creates a permanent moisture barrier inside your concrete - not just on top. It forms a protective membrane 2-4mm below the surface that waterproofs, cures, and seals while maintaining the original concrete texture. There is no visible change to the appearance of the concrete after being treated with MoistureShield™. This lifetime barrier controls moisture and pH levels, protecting all floor coverings and coatings. Apply cement-based materials once dry to the touch or install flooring and coatings just 12 hours after the surface appears dry.

InnerCrete™ Technology: Unlike Conventional Solutions

Unlike silicate-based densifiers that create crystalline structures and may cause micro-fractures, MoistureShield™ with InnerCrete™ Technology works with concrete's natural chemistry in both new and existing slabs.

How It Works:

On Fresh Concrete: Promotes Portland cement hydration to form a protective barrier

On Sweating Slabs: Creates an internal moisture barrier in cured concrete

For General Moisture Control: Forms a protective barrier that reduces vapor transmission and stabilizes pH

This permanent solution prevents moisture-related problems including coating delamination, cracking, staining, mold growth, and efflorescence—all while maintaining concrete's structural integrity.

FEATURES & BENEFITS:

- **Environmentally Friendly**
 - Zero VOCs, HAPs, or TAPs
 - Fully biodegradable and eco-friendly
 - ASTM C1315 compliant for use as a curing compound
- **Superior Protection**
 - Maintains healthy surface pH
 - Prevents efflorescence
 - Inhibits ASR & NASR
 - Blocks osmotic pressure and moisture vapor emission
 - Creates permanent 2-4mm internal moisture barrier

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Application Benefits

- Ready-to-use single component
 - Simple hand spray application
 - Preserves concrete's original appearance and texture
 - Maintains concrete breathability
 - No special equipment needed
- **Cost & Performance Advantages**
 - Improves concrete durability and longevity
 - Reduces long-term maintenance costs
 - Allows direct application of coatings and flooring systems
 - System continues to strengthen over time

Ideal Applications:

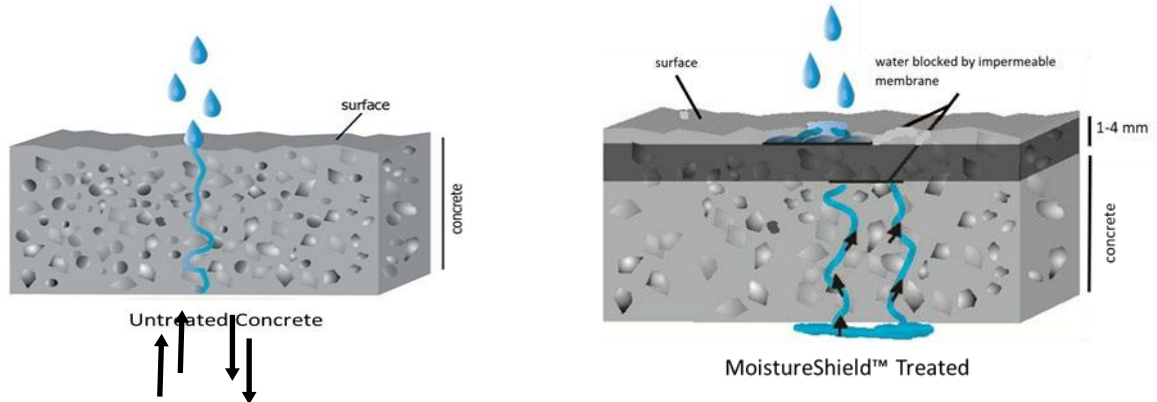
- New and existing bare concrete surfaces
- Indoor and outdoor installations
- Above and below-grade applications, including underground
- As a high-performance curing compound

PRODUCT DETAILS:

Packaging	US 4-gallon pail (15.14L)
Color	White Liquid (clears out as it absorbs into slab)
Shelf Life	24 months in unopened containers; Do Not Allow Material to Freeze
Dry Time Guidelines	30 min to 2 hours – depending on humidity and air flow
Theoretical Coverage	150-175 SF New Concrete after pour, 225 SF per gallon existing porous concrete
Application Temperature	Should be applied between 38°F (rising) and 90°F
ASTM F710	pH can be as high as 14
ASTM F2170-11	Relative Humidity of slab can be 99% to HI RH

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Example



SURFACE PREPARATION:

All Note, that in general, ALL substrates must be clean, sound, and have minimum 250 psi tensile bond strength when tested per ASTM D4541. Be sure concrete is free from oil, grease, paint, any contaminants that would act to prohibit penetration. S3 recommends Surface Prep EXT™ for concrete preparation. Do not apply to concrete that has hardeners or densifiers. (Surface Prep EXT™ will remove these applications as well open concrete and profile for proper absorption.) Concrete must be porous, according to ASTM E 331 Water Droplet Test and free of visible standing water.

Concrete surfaces can be damp or dry. MoistureShield™ product should never be pooled on the surface. MoistureShield™ should be applied in temperatures above 38°F and rising.

NEW CONCRETE SYSTEM SOLUTION: S3 MoistureShield™™ is designed to go direct to GREEN concrete, applied in approximately 12 hours from fresh pour, or when a person can walk on the concrete surface without marring it, on broom or wood float porous finish. VERY IMPORTANT – no standing water.

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APPLICATION

MoistureShield™ Installation Guide for Contractors

Equipment Selection

- **Small Areas:** Use pump sprayer with cone tip at low pressure
 - **WARNING:** Avoid high pressure that creates aerosol mist
- **Large Areas:** Use airless sprayer with 0.024-0.031" (0.61-0.79 mm) fan tip
 - Adjust pressure on new concrete to prevent surface damage
- **Alternative Option:** Agricultural sprayer with 5 GPM diaphragm pump and 0.50-1.0 GPM fan tip
- **Not Recommended:** Centrifugal pumps

Application Technique

1. Spray in a 50% overlapping pattern for complete coverage
2. Hold wand perpendicular to surface, 8-12" (15-30 cm) away
3. Use either fan or cone tip for complete coverage
4. If pooling or dry areas appear, use fine bristle broom to distribute evenly
5. Don't allow excess material to dry on slab - remove promptly with stiff bristle broom, squeegee, wet-vac, or mop

Coverage Rates

- **New Concrete (Time of Pour):** 150-200 sq.ft. per gallon
 - Apply within 24 hours of final finish when surface can bear weight without damage
- **Sweating Slab:** 200 sq.ft. per gallon
- **Existing Concrete:** 225 sq.ft. per gallon
 - For moisture mitigation

Critical Notes for Success

- Request open, porous finish (unburnished) before concrete placement
- Recommend wood trowel/float finish for maximum porosity
- For burnished/"black" finishes, use Surface Prep EXT™ first to create porosity
- For sweating slabs, apply Surface Prep EXT™, remove fully, then apply MoistureShield™
- Reapply to control joints if cut after initial application
- Treat to nearest control/construction joint if full-slab treatment not possible
- Fill existing joints with urethane crack fill before application

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Admixtures

The use of moisture vapor reducing admixtures (MVRA), integral waterproofing admixtures, or latex admixtures should not be used when utilizing MoistureShield™

Accelerators

Accelerators are often used during colder months to accelerate the setting of the concrete. These admixtures will also accelerate the action of MoistureShield™. Always check batch tickets and documents, installers must test a small area prior to a full application.

Accelerators can be inconsistent batch to batch, continuing test areas throughout the project. The test areas can vary in dimensions but equate to 9-10 sq ft. Apply MoistureShield™ to the test area broom in as directed and wait 30-45 minutes. If MoistureShield™ does not absorb after brooming and stays milky, then the accelerator is still active. Continue to test until the MoistureShield™ remains unchanged from its normal process and consistency. Once MoistureShield™ shows signs of penetrating after one soft brooming in both directions on a test area for a minimum of 30-45 minutes, full application can begin.

Typically Applied Concrete Products

There are many products on the market, we don't recommend them with the application of MoistureShield™. The variance of these products could work but most will not. If a curing compound is used prior to the MoistureShield™ application, do not treat the concrete with MoistureShield™.

MoistureShield™ Application in Challenging Weather Conditions

Hot Weather (Above 90°F/32.2°C or Below 30% RH)

- Pre-wet concrete with light mist spray ahead of application
- This prevents rapid evaporation and enhances penetration
- Continuously broom product until no visible material remains on surface
- If the product dries as coating, remove with 60-grit sandpaper on rotary buffer

Windy Conditions (Exceeds 10 MPH)

- Shroud spray tip to control application
- Maintain consistent 8-10 inch distance from surface
- Ensure complete coverage despite wind interference

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Cold Weather (Minimum 35°F/1.7°C and Rising)

- Preferably begin at 41°F or higher
- Test small area first if concrete contains accelerator
- Apply early in day due to shorter daylight hours
- Expect longer drying times in low temperatures with high humidity
- Avoid application during decreasing temperatures or when concrete may require protective covering

Managing Weather Interruptions During MoistureShield™ Application

Handling Rain Events and Morning Dew

- Light Mist: Proceed normally if no standing water forms on surface
- Standing Water Situations:
 - Areas already treated and visibly dried are considered complete
 - Areas still wet when standing water occurs must be reapplied after drying
 - Important: Mark the boundary (with tape or chalk line) between completed and incomplete sections
- Resuming Work: Wait until surface is damp but not pooling (slightly darker surface color)
- Always restart application from the last successfully treated point

Traffic Guidelines

- Allow foot traffic when product is visibly dry
- Heavy equipment or loads can be permitted after 4-hour curing period

Control Joint Management

- Recommendation: Cut control joints after MoistureShield™ application
- If joints are cut before application:
 - Clean the area thoroughly to remove all dust residue
 - Apply S3 Quikfill urethane to joints
 - Then proceed with normal MoistureShield™ application

Application Technique Reminders

Use low-pressure sprayer with side-to-side motion

- Ensure 50% overlap pattern for complete coverage
- Saturate surfaces according to specified rates:
 - New concrete: 150-175 sq.ft./gallon
 - Existing concrete: 225 sq.ft./gallon
- For vertical applications, start at bottom and work upward
- Surfaces with low absorption may require scrubbing to assist penetration
- Do not dilute the product under any circumstances

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ACTIVATION PERIOD / DWELL TIME

Product begins activation immediately and will continue to react in the presence of water. Results will be noticeable within 24 hours.

MAINTENANCE:

No special maintenance required. Clean surfaces as needed.

STORAGE & HANDLING:

MoistureShield™ Protect from freezing. All containers must be sealed properly when stored. All containers must be secured during transport to prevent damage. Lids, caps and closures must be tightened during transport and storage to avoid spillage.

DISPOSAL:

MoistureShield™ is fully biodegradable. Neutralizing and dilution with water will be required to meet local waste or sewage disposal requirements. Seek advice on local authority requirements before disposal. Spills should be contained and disposed of under the same requirements. Do not mix with other materials.

Technical Assistance

If you have any questions regarding this product, please call 800-933-7520 for further information.

SAFETY PRECAUTIONS

HEALTH CONSIDERATIONS

As with all epoxies, good hygienic habits must be observed, and the wearing of protective clothing and gloves is advised. Before using any S3 Surface Solutions, LLC. product, please read and follow the Safety Data Sheet (SDS). Use this product only as directed. Keep out of the reach of Children.

FOR YOUR PROTECTION

The data, statements and recommendations set forth in this product information sheet are based on research and development work which has been carefully conducted by S3 Surface Solutions, LLC. and we believe such data, statements and recommendations will serve as reliable guidelines. This product is subject to numerable uses under varying conditions over which we have no control, and accordingly, we do NOT warrant that this product is suitable for any use. Users are advised to test the product in advance to make certain it is suitable for their installation conditions and uses.

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DISCLAIMER

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WARRANTY

The data, statements and recommendations set forth in this product information sheet are based on testing, research and other development work which has been carefully conducted by us, and we believe such data, statements and recommendations will serve as reliable guidelines. However, this product is subject to numerable uses under varying conditions over which we have no control, and accordingly, we do NOT warrant that this product is suitable for any particular use. Users are advised to test the product in advance to make certain it is suitable for their particular production conditions and particular use or uses.

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