

# GREENUMBRELLA® DRYSHIELD



# FILLING THE VOIDS.

DEEP SUBSURFACE / PH NEUTRAL DENSIFIER / HIGHLY ABRASION RESISTANT



**ARCHITECTURAL**  
**MANUFACTURING &  
LIGHT ASSEMBLY  
PLANTS**  
**HOSPITALS**

**APPLICATIONS  
FOR DRYSHIELD**



**AIRPORTS**  
**WAREHOUSE/  
DISTRIBUTION CENTERS**  
**RETAIL STORES**  
**GARAGES**

**FOOD SERVICE  
OPERATIONS**  
**PARKING DECKS**  
**SHOWROOMS**





DEEP SUBSURFACE / PH NEUTRAL DENSIFIER / HIGHLY ABRASION RESISTANT

GREEN UMBRELLA®  
**DRYSHIELD**

## Filling the Voids

Green Umbrella® DryShield™ is an environmentally friendly concrete hardener and densifier. Reaching deep within the subsurface, DryShield creates more than a conventional shell surface. The unique formulation is insoluble, 100% reactive, and pH neutral—resulting in a bond within concrete that is harder, denser and less porous, while allowing maximum penetration of concrete colorants. A clear, odorless solution specially formulated to be a CrossOver™ densifier. Designed for application @EarlyAge™, @Profile&Polish™ or @MatureAge™ concrete. Unlike conventional hardeners, DryShield is a S.O.L.O™ (Spray-On, Leave-On) treatment that requires no scrubbing or mopping during a single application and does not require pH balance of waste water if rinsed. DryShield produces a substrate that will stain less and wear longer, reducing maintenance frequency and extending the concrete's life cycle.

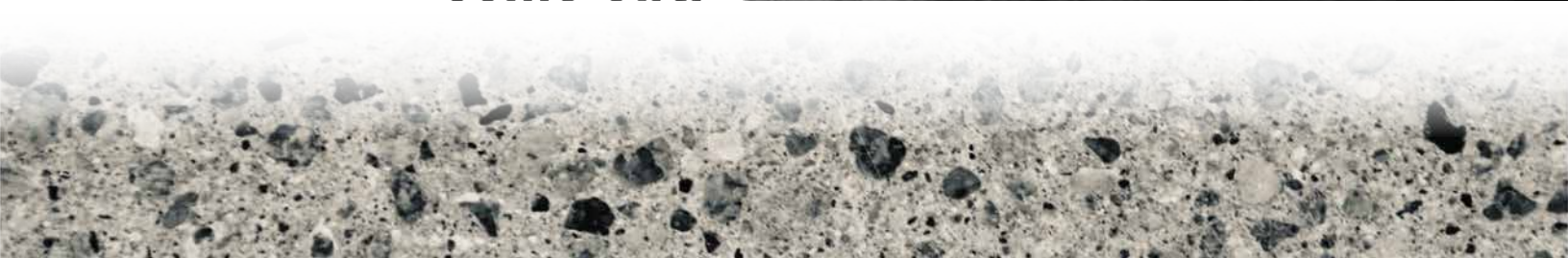
CUTSHEET



CUT TO THE CHASE  
GREEN UMBRELLA

# INSOLUBILITY

Green Umbrella®  
DryShield is Insoluble.  
Once DryShield has  
reacted within the  
concrete – it will not  
come out.



FEATURES & BENEFITS OF THE INDUSTRY'S MOST VERSATILE CROSSOVER™ DENSIFIER @ EARLY AGE™ @ MATURE AGE™ @ PROFILE & POLISH • INSOLUBLE, PRODUCT PERMANENCE WILL NOT WASH OUT • DEEPEST SUBSURFACE PENETRATION, 10X DEEPER THAN CONVENTIONAL HARDENERS • NATURAL SILICA FORMULATION, ENVIRONMENTALLY RESPONSIBLE • UNIQUE NANO TECHNOLOGY, SUPERIOR PERFORMANCE • SUPERIOR STAND-ALONE CONCRETE HARDENER, 2X HARDNESS OF CONVENTIONAL HARDENERS • PREVENTS DANGEROUS OFF-DUSTING, SAFER FOR BUILDING OCCUPANTS • RESISTS PENETRATION OF OILS, CHEMICALS AND STAIN-CAUSING MATERIALS \*(LOW VISCOSITY HIGH DETERGENT AND CHLORINATED OILS REQUIRE MAXDEFENSE™) • PH NEUTRAL, NON-HAZARDOUS • 100 PERCENT REACTIVE, CREATES MORE THAN A SHELL SURFACE • 100 PERCENT ABSORBED, CUTS WASTE • LOW SOLIDS FORMULATION, DEEPER PENETRATION



## ADDITIONAL BENEFITS

### @EarlyAge™

- No 7-28 Day Application Restriction, Less Downtime
- Protects Surfaces During Construction
- Not A Desiccant, Will Not Damage Surface Cure Absorbing Water Of Convenience
- Does Not Require Calcium Hydroxide Reaction, May Apply Same Day As Pour Will Not Gel On Surface, No Swelling in Pores that Creates Craze Cracking

CONVENTIONAL  
HARDNER

28  
DAYS



1  
DAY

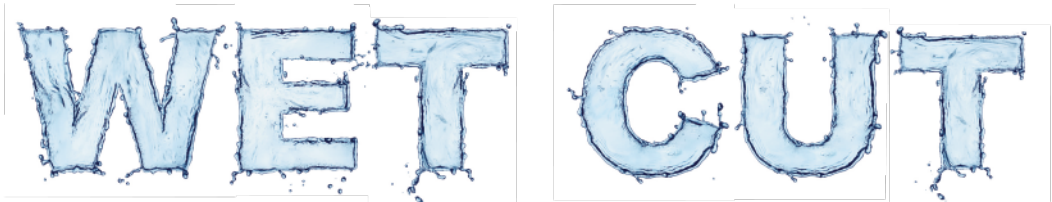
DRYSHIELD



## ADDITIONAL BENEFITS

# @Profile&Polish™

- Designed For Wet Profile, Hone and Polish Process, No Slab Whitening
- Combines With Nano Colorant, One Step Color Densifier
- Special Formulation, Increased Concrete Colorant Retention
- No Concrete Sweating After Application, Prevents Long Downtime for Slab Recovery
- Deeply Subsurface, is Not Cut Off During Profiling, Honing & Polishing Stages



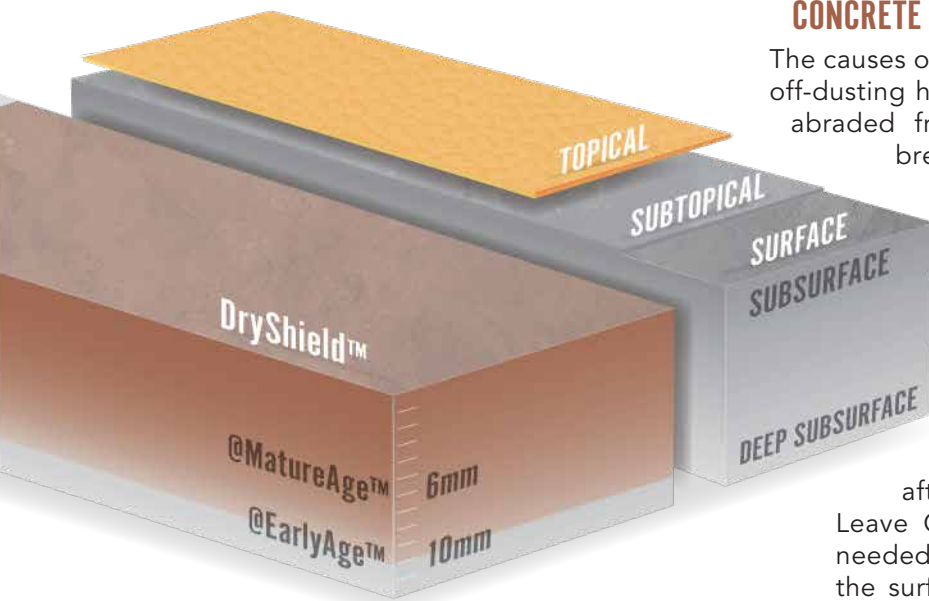
Green Umbrella promotes an environmentally responsible concrete process that implements mechanical action with wet abrasion to craft a specified concrete profile. The use of water and a liquid cutting agent for surface profiling, results in a superior wear surface and avoids airborne silicosis issues during construction and occupancy without sacrificing durability or increasing future maintenance costs.



## ST ATILE Over™ IFIER

- REDUCES POROSITY, **INCREASED LIFE-CYCLE** • CREATES A BREATHABLE SURFACE, **NO FLAKE OR PEEL** • NATURAL APPEARANCE, **REDUCES CLEANING SCHEDULE** • REQUIRES NO RINSING & DISPOSAL, **CUTS LABOR** • SIMPLY AIR DRY, **CUTS LABOR**
- HIGHLY ABRASION-RESISTANT TO FOOT & WHEELED TRAFFIC, **INCREASES LIFE CYCLE** • SOLO APPLICATION & BRIEF DWELL TIME, **CUTS DOWNTIME** • NON-SODIUM, **DOES NOT CONTRIBUTE TO ALKALI-SILICA REACTION** • NO EFFLORESCENCE & WHITENING COMMON WITH CONVENTIONAL HARDENERS, **CUTS DOWNTIME** • NO VOC'S, **ENVIRONMENTALLY RESPONSIBLE**
- NON-RESINOUS POLYMER FORMULATION, **PREVENTS YELLOWING & TIRE MARKING** • 2-3X GREATER COVERAGE RATE OF CONVENTIONAL HARDENERS, **CUTS LABOR**

# SUBSTRATE INDEX



## CONCRETE OFF-DUSTING

The causes of the surface weakening of concrete vary. Concrete off-dusting happens when fine particles of crystalline silica are abraded from the surface and released into the air we breathe. It is well documented its detrimental effects.

Arguably, the primary reason concrete treatments are applied is to prevent off-dusting. Green Umbrella DryShield "Fills the Voids" to eliminate weak porosities and produce an umbrella of protection for future use.

## S.O.L.O.™ APPLICATION AND DWELL TIME

Green Umbrella DryShield is applied once and does not require a long 24-48 hour set time after application like many hardeners. A Spray-On Leave On treatment, with only one surface application needed. There is no scrubbing, gelling, or re-wetting of the surface. The initial 30 minute dwell time with a wet surface is all that is needed. Once dried, the reaction is permanent within the surface & open to traffic. No re-wetting. Insoluble.

## NOT A CANDY SHELL

Concrete treatments are designed for surface protection. Unfortunately, many conventional hardeners create a shallow, thin shell of hardness at the sub-surface. When this "candy shell" is breached by abrasion, a softer than original surface may be exposed; this may could be exaggerated if these products are introduced at an early age. DryShield does not work as a desiccant, absorbing water of convenience during an early age, creating this phenomenon. DryShield provides industry-leading surface and in-depth subsurface protection without scavenging water at early age or washing out during routine maintenance.

## INCREASED HARDNESS

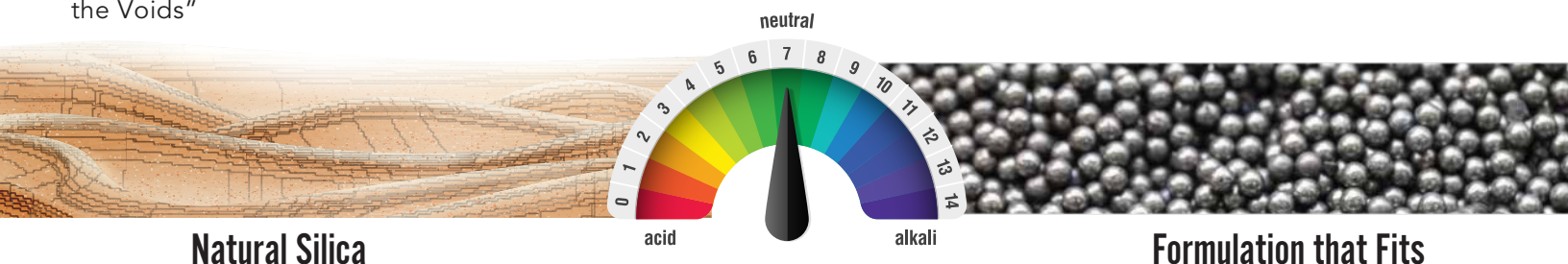
A superior stand-alone densifier. In its natural state, the active ingredients in DryShield yield 2x the hardness of conventional formulations. While abrasion resistance figures are frequently exaggerated, and concrete matrices vary, often DryShield provides a 40-80% increase in hardness. In a double-blind test following ASTM C779-05, DryShield outperformed three conventional hardeners. The surface, subsurface, and deep sub-surface will be harder and more durable with DryShield because it "Fills the Voids"

## PENETRATION

DryShield "Fills the Voids" at the surface, due to its nano design, penetrates and fills the deep subsurface. All concrete matrices are not the same; thus, the depth of penetration will vary. Often, DryShield penetrates 2x-3x deeper than conventional products. Penetrating and reacting as deep as 10mm below the surface. This allows for abrasive profiling without the densifier being cut off shortly after application, featuring DryShield as a true CrossOver™ option @Profile&Polish™ densifier.

## APPLY SAME DAY AS POUR

No calcium-hydroxide reaction is required; DryShield can be applied the same day concrete is finished. No conventional 28-day downtime, featuring a CrossOver™ option @EarlyAge™ application, saving construction time that can be devoted to other trades while protecting the surface during the most abusive time of its life cycle.





# ESTIMATING



Spray and Go

Coverage Rates: Green Umbrella DryShield has no dilution and an average coverage rate of 400 sq. ft. per gallon. When abrasive polishing, the coverage rate can be increased to up to 600 sq. ft. per gallon when used with Green Umbrella GreenCut™ cutting agent as part of a Green Umbrella Architectural Concrete System. Under normal conditions, only one application is necessary. Coverage depends on the porosity of the concrete substrate, time, temperature, and humidity. Container Sizes: 5, 55, and 275 gallons. Each container is labeled with information, including the product name, description, and application instructions.

## EASY TO APPLY - SIMPLE TO MAINTAIN



Green Umbrella DryShield is R.T.U. - no mixing required. S.O.L.O.™ application with a Green Umbrella sprayer. A floor with DryShield resists stains. Maintaining treated surfaces requires nothing more than proper Green Umbrella Maintenance System treatments, damp mopping, auto scrubbing, and periodic burnishing if desired.

## ENVIRONMENTALLY RESPONSIBLE PRODUCT



Uses natural silica to fill the voids.

Green Umbrella chose to formulate a product that uses natural silica to fill the voids not using inexpensive resinous polymers that have a greater, negative impact on the environment. DryShield is not a wax on wax off maintenance treatment. As a pH neutral treatment does not contribute to hazardous downstream water impact or material disposal. As a result of the reduction of porosity, the life-cycle of the surface is greatly increased. As a part of a system design approach, our process and products require less labor and downtime while lowering environmental impact.



## STANDARDS & TESTING

**ASTM C779-05** Standard Test Method for Abrasion Resistance of Horizontal Concrete

**ASTM C1583** Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)

**ASTM 1308** Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes (Aviation Fluid Resistance with Green Umbrella MaxDefense™ System)

**ACI Standard 302** Guide for Concrete Floor and Slab Construction

**USDA Compliant**

**FDA Approved**

**MOHS Scale of Mineral Hardness**



***“YOU CAN’T STOP THE RAIN,  
BUT YOU CAN STAY UNDER  
A GOOD UMBRELLA.”***

### ARCHITECTURAL CONCRETE

### SYSTEM SOLUTION

### UNDER ONE GREEN UMBRELLA

“Our **MISSION** at Green Umbrella is to bring to the concrete market innovative products combined with a consultative approach that resolves common problems; prevent future issues, and create solutions for architectural concrete. We accomplish all of this with an environmentally conscious systems solution, consistently found under one Green Umbrella.”

