

APPLICATION SHEET

GREENUMBRELLA®

ICESTART



GREENUMBRELLA®

ICESTOP



Start High-Performance Concrete

Stop the Damage @EarlyAge

IceStart™ Application Ratio:

400-600 SF per gal.

IceStop™ Application Ratio:

400 SF per gal.

IceStop™ Dwell Time:

30 min.

IceStop™ Drying Time:

30-60 min. @75F & 50% RH to foot traffic, 3 hours to wheel traffic

IMPORTANT:

Read Technical Data Sheet and SDS prior to application. Follow all directions, including safety information. Installer education, training and appropriate handling is necessary for product success. Due to the variety of concrete, the applicator must test the product for compatibility prior to full application.



Indoor



Outdoor



Sprayer



Rider
Trowel



Walk Behind
Trowel

Concrete Placement

1. Proper form setup is essential and must be established from a single benchmark.
 2. Ensure sub-grade is properly compacted before placing any concrete. A properly consolidated base will support redi-mix trucks without rutting.
 3. Concrete Slump should be maintained +/- 1"
 4. Concrete placement should be as uniform as possible in front of the screed to avoid uneven aggregate exposures issues.
 - Placing the concrete too high and striking it off will cause stripes of aggregate when polished; lows will become stripes of cream without visible aggregate.
 5. Laser Screed /Truss /Hand-held Vibra Screed acceptable (Vibration is required for proper consolidation)
 - Turn off vibration when stopping screed to avoid creating a cream line with the screed.
 6. If above 50 degrees apply the first application of Green Umbrella IceStart @ 1200 sqft/gal
 - Spray system may be mounted to the laser screed for larger pours
- (If ambient concrete temperature is below 50 degrees, follow ACI Standard 306R-16 for Cold Weather Concreting. Thus waiting for first application until after the first pan, applying two other applications during finishing.9)
7. Roller Bug (May also be adapted to the Laser Screed)
 - Roller Bug is used to ensure large aggregate is pushed down
 - Should be run in 1/2 overlapping passes
 8. Channel Float/Bull Float "Mop" (8' to 10' preferred) to smooth the surface and locate high and low spots that need to be corrected. Any major re-straightening, if required, must be done during this phase.
 9. Re-straighten edges, columns, wall lines, and around all protrusions w/ 4'

TIME, TEMPERATURE & HUMIDITY

For a chemical reaction to take place successfully, time must be allocated for the full reaction. Likewise, when applying Green Umbrella IceStop to concrete, there must be an adequate amount of dwell time for the reaction to take place. Doing so will help to achieve the best result.

For IceStop to effectively penetrate the substrate, the temperature should not be less than 40°F (4°C) for several hours after application. If temperatures are lower than recommended, the chemistry may take much longer to react and penetrate the concrete substrate. If the temperature exceeds the recommended maximum of 95°F (35°C), or if conditions are windy, the chemistry could react and dry before penetrating the substrate. In such circumstances, keep floors hydrated with water for recommended dwell time.

Humidity also plays a role in the dry time. The product applied to a dry slab of concrete in an arid climate will dry faster than in a humid environment. In dry climates with low humidity, it may be necessary to hydrate the slab to allow for proper dwell time. If several treatments are being applied, product staging should be planned to meet all treatment **dwell times** and **dry times**. It is recommended to use **dew point** data from a mobile hygrometer to determine the best staging of concrete treatments to eliminate needless downtime. Please consult a GreenUmbrella consultant with any questions. The use of on-site hygrometers and thermometers can provide meaningful data to facilitate treatment application success.

Board and smoothed with a magnesium hand float. (These areas should not have a steel trowel used on them until the body of the floor is being closed with steel trowel blades.) Do not prematurely close the slab.

Finish

1. If it does exist, wait until bleed water sheen has dissipated and a footprint leaves 1/4" or less indentation before breaking the surface the first time with pans or float blades.
 - First break w/pans should follow a pattern 90° to screed direction.
 - Back all edges with a trowel to avoid stacking the aggregate at the edges.
 2. Apply the second application of Green Umbrella IceStart @ 1200 sqft/gal
 - This application may be applied via the sprayers on ride on trowels to avoid walking on the slab, making sure to apply at 1200 sq.ft./gal.
 3. If there is a need to walk on the slab for any reason, kneeboards or finishing slicks must be utilized to maximize floatation and minimize depressing the aggregate. (Failure to do so may result in visible footprints after polishing.)
 4. After each pass, re-straighten edges, columns, wall lines, and around all protrusions w/ 4' board and smoothed with a magnesium float. (These areas should not have a steel trowel used on them until the body of the floor is being closed with steel trowel blades.)
 5. Second break w/pans should follow a pattern 90° to initial break direction.
 - Apply the third and final application of Green Umbrella IceStart @ 1200 sqft/gal
 - This application may be applied via the sprayers on the riders to avoid walking on the slab.
- ** Green Umbrella IceStart may still be utilized as a "Finishing Aid" to correct surface defects and "Cat-Faces" during this phase of floating and even in the early finishing.
6. Third break w/pans if needed; however, the finisher may use their judgment and experience to begin laying the floor down with combination blades.
 7. Combination Blades should be used to close and finish the floor.
 - Blades should be pitched as low as possible 5-8° maximum pitch to minimize edge pressure and ensure the aggregate matrix is consolidated as much as possible and to minimize rolling the aggregate and breaking the cementitious bond.
 8. Use a rider trowel or walk behind for final finish. For best results, use a combo machine that has been kept clean for this purpose. At the time of final burnish its very important to make sure any small pieces of concrete that are on the surface are blown off the surface with a leaf blower. Do Not finish over these as there may be noticeable defects. Use the edge of a finish trowel to cut any of these off the surface and then correct if possible with the trowel.
 9. After the finishing has been completed and the trowels have moved off the area ensure you can walk on the surface without marring and then apply Green Umbrella IceStop @ 400 sq ft per gallon.

APPLICATION SHEET

GREEN UMBRELLA®

ICECAP



Indoor



Outdoor

Application Ratio:

1,200 SF per gal. *2 Applications minimum required*

Dwell Time:

20-30 min.

Dry Time:

30-60 min. @75°F, 50% RH to foot traffic.
Burnish before opening to wheel traffic.

IMPORTANT:

Read Technical Data Sheet and SDS prior to application. Follow all directions, including safety information. Installer education, training and appropriate use is necessary for product success. Concrete porosity may vary, applicator should test for compatibility prior to full application.



Dust Mop



Mop



Autoscrubber



Sprayer



T-Bar



Burnisher

Surface Preparation

IceCap™ is a durable, subsurface nano-finish protection and maintenance treatment. @EarlyAge™ or @MatureAge™ concrete must be free of surface contaminants, sealers, wax or other foreign products. Prior to introducing to any sound concrete surface, remove loose debris or contaminants by vacuuming, sweeping, auto scrubbing and/or mopping the surface.

Environmental Conditions

For Green Umbrella® IceCap™ to effectively penetrate the substrate, the temperature should be 40°F and rising. Be aware of potential rapid evaporation in high temperatures. IceCap™ is 100% reactive, non-hazardous (<50 g/L VOC) and will NOT require special disposal.

@EarlyAge™

When applying Green Umbrella® IceCap™ to @EarlyAge™ concrete at any phase of construction, or as a part of regular maintenance; ensure the final surface will be free of standing water for at least 72 hours after application.

1. Dust Mop using a clean, untreated head to remove any potential surface contaminants.
2. Green Umbrella® IceCap™ is R.T.U. and should be applied S.O.L.O. to a clean surface using a GU recommended, dedicated, non-metal sprayer evenly on the surface.
3. **Application Ratio:** 1,200 SF per gallon. Yield estimated with use of Green Umbrella GreenIce Cure IceStart™ and IceStop™ and will vary depending on the concrete surface.
4. Plan application to maintain a wet edge and work toward an exit. Spray onto concrete and applicator using a weighted T-Bar with a clean pad, distribute the treatment evenly to ensure uniform coverage. Do not allow to puddle excessively. Do not re-apply to fast drying areas. Work toward the exit. Do not walk over the freshly placed, wet surface.
5. **T-Bar Note:** Change applicator pads frequently to prevent surface contaminant build-up which may affect final finish. Clean used T-Bar

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pads using clean water for re-use.

6. **Overspray:** Immediately wipe with a wet cloth and follow with a dry cloth to remove treatment from finishes or furniture after contact.

7. **Dwell Time:** 20-30 minutes wet finish for full reaction. Product will not gel or require rinsing.

8. **Dry Time:** 30-60 minutes. Allow product to air dry. If the product is not dry within 2 hours, the use of indirect airflow may reduce dry time. Environmental controls will facilitate consistent dry times.

9. After initial application is dry, repeat steps 1-4. A second application.

10. Once the 2nd coat is dry, Burnish using a concrete weighted, UHS (Ultra-High Speed), propane powered, burnisher equipped with a GreenGloss™ thick black pad.