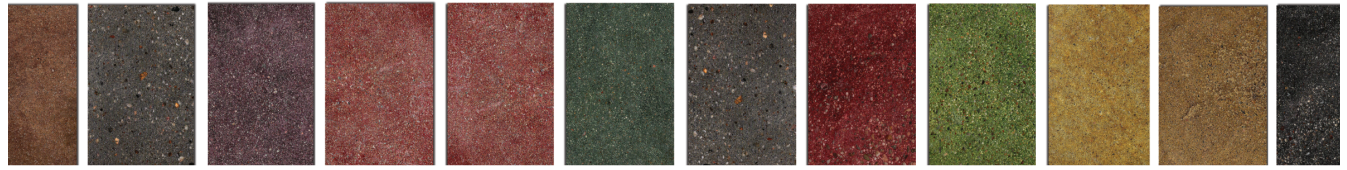


GREEN UMBRELLA



TECHNICAL DATA SHEET

COLORFLASH

GREEN UMBRELLA

Product Description

Green Umbrella™ ColorFlash is a solvent based, but is VOC compliant with the use of acetone making it an environmentally friendly. This translucent dye uses exceptionally fine molecules of color and deeply penetrates almost all concrete surfaces. This product is very successful when coloring concrete. Although Green Umbrella™ ColorFlash is colorfast, it is not UV stable in all conditions. Green Umbrella™ ColorFlash provides 22 standard color possibilities for stencils, patterns, logos and color combinations with crisp and vibrant color definition. Green Umbrella™ ColorFlash is a responsible alternative for professionals concerned about the environmental impact of acid stains. Green Umbrella™ ColorFlash is compliant with all state VOC standards, and contains no harmful residues.

Basic Use

Green Umbrella™ ColorFlash is specially formulated for use in manufacturing and light assembly plants, warehouse/distribution centers, food service operations, retail stores & showrooms, parking decks, garages, airports, hospitals and any other places where polished concrete surfaces are maintained.

For GHP Floors (Ground Honed & Polished): Green Umbrella™ ColorFlash is part of the GUEPC System (described in section below).

Features and Benefits

- Rich color intensity with a wide variety of colors
- Quick drying
- For polished and non-polished concrete
- VOC compliant
- Easy application
- Great for indoors
- Excellent for stencils and artwork



Websites & Consulting

Architects & General Contractors:
GreenUmbrellaSystems.com

Product Consulting:
Info@GreenUmbrellaSystems.com

Estimating

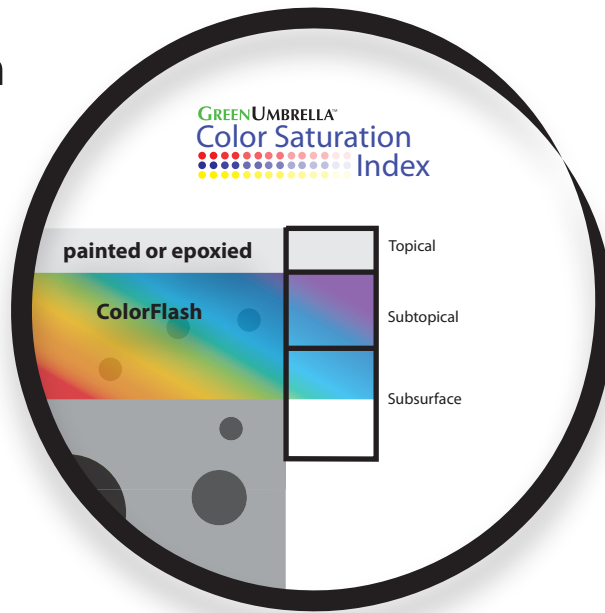
Container Sizes: Green Umbrella™ ColorFlash is available concentrated solvent that mixes to total product sizes of 1 and 5-gallon amounts. Each container is properly labeled with information including the product name, description, mixing directions and condensed application instructions.

Technical Information:

Chemical Family.....	Concrete Solvent Dye
Substrate Location.....	Surface
Appearance.....	Color Varies
Odor.....	None
Film Forming.....	No
Active Ingredients.....	100%
Type.....	Concrete Solvent Dye
pH.....	Approximately 11
Boiling Point.....	N/A
Packaging.....	Powder form for 1 Gallon or 5 Gallons of Acetone
Shelf Life.....	2 years
VOC (grams/liters).....	48
Freezing Point.....	N/A



MSDS sheets for all products are available at
www.GreenUmbrellaSystems.com



Dilution: Green Umbrella™ ColorFlash is easy to use. Simply mix with 1 or 5-gallons of water depending on solvent amount and apply using a Green Umbrella™ Sprayer with a #8 gray tip for coverage of approximately 400 sq. ft. per gallon. Green Umbrella™ ColorFlash dries in minutes.

Coverage Rates: When applied using a Green Umbrella™ sprayer, Green Umbrella™ ColorFlash has a coverage rate of up to 700 sq. ft. per gallon, but on average covers 400 sq. ft. per gallon. Coverage depends on the porosity of concrete substrate, time, temperature and humidity.

Specifications

For Long Specifications or CSI Specifications, go to www.GreenUmbrellaSystems.com under Specs.

www.GreenUmbrellaSystems.com.

Short Specification
DIVISION THREE
SECTION 03 3536

A Green Umbrella Engineered Polished Concrete (GUEPC) floor requires that surfaces must be processed by means of a planetary grinding machine to mechanically remove existing coatings, surface imperfections and flatten concrete floors. To reach the desired surface cut and clarity of reflection additional abrasive steps may be required to grind, hone or polish floors to the specified sheen.

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When grinding, honing or polishing concrete, Green Umbrella Cleaner and Enzyme Degreaser can be used before processing floors with 200 GUr to remove potential contaminants from both new and existing concrete. The application of densifiers, colorants and impregnated microfilms may also be included, as specified by the architect/designer/contractor. To find a certified contractor, call (844) 200-7336. A ten-year limited warranty will be issued to the owner upon receipt of a completed and signed job survey form, detailing the steps, cuts and products used in the processing of the floor.

IMPORTANT: FOR A SUCCESSFULLY POLISHED CONCRETE FLOOR MORE IS NEEDED THAN SPECIFYING CHEMISTRY. WAYS AND MEANS MAY BE NECESSARY, PLEASE CONSIDER THE FOLLOWING: SPECIFYING GREEN UMBRELLA™ ENGINEERED POLISHED CONCRETE.

(GUEPC) Green chemistry is just one part of a successful specified concrete floor. GUEPC system is a complete concrete polishing system from design to completion it uses our GREEN UMBRELLA™ chemistry in the polished concrete market.

The GUEPC can be as extensive as from the concrete pour to the maintenance of the floor. It starts, if possible, by designing the canvas, or the slab. Green Canvas shrinkage compensating concrete can be specified within the mix design (ACI 223R-10) to ensure that the surface is ideal for polishing. Moving beyond the canvas, there are four major components to the GUEPCS: the Process, the Equipment, the Chemistry and the Craftsmen. All of its components follow the GP Nine (Fundamentals of Green Polishing) GUEPC is not opening the concrete substrate and applying a polymer sealer.

(continued from pg 2)

A green mechanical process involves processing the floor wet to avoid silicosis issues affecting either installers themselves or by endangering future inhabitants by contaminating air ducts in the building. The process uses a progression of diamond grits on a machine built for wet concrete processing. The use of water enables a higher quality cut to the floor. The wet grinding system has been well supported in the industry for the best approach to clarity and time savings for exposure of aggregate among other advantages.

GUEPC equipment carries the weight to see the concrete grinding, honing and polishing process through to completion and can even expose aggregate if desired. GUEPC uses alternative fuels to leave a lesser impact on the environment. Meeting GS-24 and other sustainable requirements. Green Umbrella™ grinders (Green Grinder or Stone Extreme) and edger (Green Umbrella™ Low Profile Edger) process the entire floor, with the same profile within ¼ inch of walls or under shelving. Green Umbrella™ controls the diamond matrix of all our cutting abrasives, eliminating the inconsistencies often found in the industry and maintaining a consistent look throughout the entire floor.

Green Umbrella™ concrete treatments are non-sodium and do not generate hazardous waste. The Green Umbrella™ line of densifiers are not water soluble and do not contribute to alkali-silica reaction. Green Umbrella™ treatments that are pH neutral they will not resist color introduction or promote "walk off", which is common with many hardeners. Green Umbrella™ dyes are a standard in the industry. Green Umbrella™ colorants are micro-pigments (ColorPolish or Color Shield), and have superior color fastness compared to traditional stains and dyes.

GUEPC floors include accountability through onsite management. Green Umbrella™ Craftsmen are experienced and have many certifications through in-depth training. From design to completion, the GUEPC system covers all aspects of the GP Nine. We simply offer the greenest options for grey concrete. FROM DESIGN TO COMPLETION, YOU EXPERIENCE A COMPLETE SYSTEM.

Environmental Responsibility and LEED Considerations

GUEPC specified process is specially designed to require less labor and downtime while lowering environmental impact. Green Umbrella™ ColorFlash is easy to apply, and because the application is simple fewer laborers are required. Green Umbrella™ ColorFlash has zero VOCs and has a minimal impact on indoor air quality.

Optimize Energy Performance

- Polished concrete allows the advantage of utilizing the thermal mass of concrete in heating and cooling.
- Polished concrete provides the ability to increase the

benefit of ambient natural lighting and/or reduce the required lampage.

Building Reuse/Construction Waste Management/Recycled Content

- Existing Buildings — Environmental stewardship through the reuse of existing floor.
- New or Existing Buildings — Not wasting materials or energy required to produce a floor covering or topical coating.

VOC/IAQ/Long-term Maintenance

- Polished concrete has zero VOC content.
- Many studies indicate that indoor air quality is enhanced with properly maintained hard surfaces vs. carpet.
- Polished concrete does not support combustion, nor does it produce smoke or toxic fumes.

Life Cycle Cost

- Sources show polished concrete to be the lowest life-cost flooring option available

Grind Hone & Polishing Equipment

Green Umbrella™ equipment meets GS-24 and LEED Maintenance Guidelines.

Green Umbrella™ Uses Propane fueled equipment which saves the owner as much as 50 cents a square foot in electrical bills due to three phase and 220 volt equipment that is used by many GHP contractors. Propane in itself is not a direct greenhouse gas and is one of the world's most widely used alternative fuels. In fact, electric power adds 80% more CO2 into our atmosphere than does propane. Propane equipment can be safe, clean, and efficient fuel. However, all Green Umbrella™ propane equipment should have the following to be used in the concrete polishing industry: CARB and EPA certification - the engines are certified annually and independently by CARB and EPA to meet their strict guidelines for low CO2 emissions.

ESDS (emissions shut down system) – machines are manufactured to incorporate a 3-way catalytic muffler to lower

Potential LEED Credits

Polished Concrete is a sustainable floor. The intent of the following credits is to rate output efficiency. Polished concrete reduces energy and material waste, thus reducing environmental impact.

New Construction, Schools, Core and Shell, Commercial Interior.

Material and Resources - MR Credit 1 & 1.1 Building Reuse

Material and Resources - MR Credit 1.2 Building Reuse

Material and Resources - MR Credit 3 & 3.1 Material Reuse

Material and Resources - MR Credit 4 Recycled Content

Indoor Environmental Quality - IEQ Credit 4.3 Regional Materials

CO2 emissions and an ESDS that monitors the engine for irregularities and automatically shuts the machine down if emissions rise.

Testing

For all independent lab testing contact us at Info@GreenUmbrellaSystems.com

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GHP Equipment:

- High Productivity Rider Grinder — processes larger areas in less time.
 - o Heavy duty commercial floor grinder/polisher by Green Umbrella™, Stonextreme or equivalent.
 - o Minimum 933 pounds head pressure.
 - o 77 inch grinding width.
 - o Minimum 8000 square feet per hour production rate.
- Grinder/Honer/Polisher — grinds, hones, and mechanically polishes floors.
 - o Propane powered, heavy duty commercial floor Green Grinder/Polisher by Green Umbrella™.
 - o Minimum 785 pounds head pressure.
 - o CARB/EPA approved.
 - o 30 inch grinding width.
 - o 12 diamond, counter clockwise rotation.
 - o Minimum 1200 square feet per hour production rate.
 - o Provide minimum of two units on site.
- Edger — processes floors within a ¼ inch of wall.
 - o Propane powered Green Edger by Green Umbrella™ or Productions Team

- o Minimum 165 pounds head pressure.
- o CARB/EPA approved.
- o 1/4 inch cut to wall.
- o Four diamond head, 640 RPM diamond rotation.
- o Provide minimum of two units on site.
- Burnisher — removes un-reacted material and gives high gloss shine.
 - o Propane powered, high productivity Green Polisher by Green Umbrella™, Pioneer Eclipse or Eagle.
 - o CARB/EPA approved.
 - o 27 or 39 inch burnishing width.
 - o Head Pressured
 - o Minimum 2000 RPM.
- Auto Scrubber — cleans between abrasive steps to prevent contamination. *Important: not all floor scrubbers are effective in slurry recovery.*
 - o Auto scrubber by Tomcat, Pioneer Eclipse or Nilfisk-Advance.
 - o Minimum 500 pound head pressure.
 - o Water application and minimum 30 gallon recovery tank.

Abrasives for GHP Equipment

- Abrasives — diamond abrasives cut concrete substrate in a sequence of steps.
 - o Metal bond abrasives (GUm), resin bond abrasives (GUr), and coating removal metal bond abrasives (GUcr) by Green Umbrella™.
 - o Match hardness of abrasives to hardness of concrete.
 - o 10-segment diamond pad except for coating removal with GUm or GUr matrix.

Prep. Equipment

For non-GHP (Grind, Hone and Polish) or vertical concrete:

- Power Washer on low psi
- Industrial Water Broom — cleans and removes dirt buildup before product application.
 - o Heavy duty industrial water broom by WaterMiser Broom or equivalent.
 - o Up to 180 PSI of water.

Application Equipment

- Hand-Pump Sprayer Applicator — used to apply product evenly and consistently.
 - o Industrial CO2 driven hand-pump sprayer applicator by Green Umbrella™, Patriot Sprayers, or equivalent.
 - o Maximum tip pressure 40 psi.
 - o # 8 gray conical tip.
- T-bar with blended applicator — distributes product sprayed on concrete substrate.



All products can be seen at GreenUmbrellaSystems.com

Product Placement/Application

Safety: WARNING – Before using or handling this material, read the Material Safety Data Sheet. Green Umbrella™ ColorFlash dyes are highly flammable when mixed with acetone. There should always be proper ventilation when applying dye. Ensure that all pilot lights, heaters, and electric tools are turned off and that rooms are properly ventilated with a non-explosive ventilation system. Wear protective gloves and safety glasses when mixing.

* Please note, that as of 2/01/06 the United States Environmental Protection Agency's June 16, 1995 volatile organic compounds (VOC) classification for acetone remains in effect. The EPA has granted acetone VOC exempt status. In addition, acetone is not a hazardous air pollutant (HAP) under the Clean Air Act Amendment of 1990. Most states, such as California, follow these federal guidelines. Check with your individual state if the question arises.

CAUTION: TAKE CARE IN MIXING, TRANSPORTING AND APPLYING THE MIXED DYES AS DRIPS OR SPILLS CAN BECOME PERMANENT. The dye particles are susceptible to air movement-protect all surfaces or equipment from dye drift.

Preparation: Floors must be clean, dry and free of contaminants before Green Umbrella™ ColorFlash can be applied.

Vapor: Moisture Vapor Drive may take dye farther into the substrate producing a faded appearance. For best results perform a moisture content test on both newly poured and existing slabs. Slabs with a moisture content of 5 percent or less show best performance. High moisture levels may affect performance of color. If more than 85 percent, use a different colorant like Green Umbrella™ ColorShield or Green Umbrella™ ColorDense.

Protect all adjacent surfaces: Use masking materials that will not be affected by the acetone in order to keep the dye from bleeding between surfaces. Keep a container or bucket in the application area to store the tip and wand between applications. Protect the life of your sprayer by running clear acetone through the pump and wand immediately following dye application. This is recommended between color changes and prior to storing the sprayer between jobs.

Floor Protection: Green Umbrella™ recommends the use of GU Ram Board breathable floor covering to protect your work if construction is to continue.

Test Area and Mock-up: Always perform a test of this product in a small area to test performance of product before proceeding to full application.

Non-GHP/Open Concrete

1. Mix Green Umbrella™ ColorFlash with corresponding amount of acetone and shake vigorously for approximately 30 seconds.

2. Allow solution to dissolve for a minimum of 3 hours before use.

3. Using a Green Umbrella™ Sprayer with a #8 gray tip, apply dye uniformly in an overlapping circular motion, holding the wand approximately 12-18 inches above the surface. Allow to dry for 1-2 minutes.

4. Remove residual dye with an auto-scrubber using red pads and water. Allow to dry.

5. Apply Green Umbrella™ Microfilm or Outdoor Microfilm.

Indoor GHP

1. Grind with a 6-50 grit GUm metal bond abrasive. Continue to process to a 100 and 200 grit metal bond diamond abrasives. Hone using 100 and/or 200 GUHr resin abrasive.

2. Mix Green Umbrella™ ColorFlash with corresponding amount of acetone and shake vigorously for approximately 30 seconds

3. Mix in Green Umbrella™ Penetrating Agent for the best penetration of dye, with hard concrete and high humidity this is required. Allow solution to dissolve for a minimum of 3 hours before use.

4. Apply Green Umbrella™ ColorFlash. Using a GU sprayer-with a #8 gray tip, apply dye uniformly in an overlapping circular motion, holding the wand approximately 12-18 inches above the surface. Allow to dry for i-2 minutes. For the most even, uniform, some applicator immediately follow spraying with a terry cloth applicator.

5. **It is important to remove residual dye, this is not optional.** With an auto-scrubber using red pads and water is highly recommended. Allow to dry. Or if auto scrubber is not possible, residual dye may be removed after applying Green Umbrella™ Dry Shield. Allow Dry Shield to dry completely.

6. Burnish on low with a Green Umbrella™ black pad and GreenGloss Burnisher.

7. Reapply if deeper color is desired. However, this can be done no later than the last resin cut. A third application would have little effect.

8. Perform a white rag test to see if dye has been removed from subsurface by wiping the rag on the slab and see if dye is on the rag. Clean until there is no residual dye on the surface. If it is not removed residual dye can bond to the abrasives and mark the floor.

9. Continue to polish with 400-3000 grit GUPr resin abrasives.

(continued from pg 5)

GreenCut/Hybrid Cut Treatment System

1. Review application directions for Green Umbrella™ GreenCut.
2. Confirm color choice, it will be very difficult to change color after application.
3. After the floor, treated with Green Umbrella™ GreenCut, has been thoroughly cleaned, hone cut with water and process floor to at least a 100 grit GUHr abrasive.
4. Auto scrub with water.
5. Allow to be at least damp dry, no puddles of water. Because GreenCut closes off the pores of the concrete, DO NOT WAIT SEVERAL DAY TO APPLY Green Umbrella™ Color-Flash. It is best applied within hours. Apply ColorFlash when the concrete is open.
6. STEPS: 4-6 FROM ABOVE.
7. Apply Green Umbrella™ Shield & Enhance.
8. Continue with last GUPr resins desired.
9. For added protection and gloss it is recommended to apply Green Umbrella™ Microfilm.

Note: Time, Temperature & Humidity:

For a chemical reaction to take place successfully, time must be allocated for reactants to fully react. Likewise, when applying Green Umbrella™ ColorFlash to concrete, there must be adequate amount of dwell time for the reaction to take place. Doing so will help to achieve the best result. For Green Umbrella™ ColorFlash to effectively clean the substrate, the temperature should not be less than 50° F. If temperatures are lower than is recommended, the chemistry may take much longer to react with and penetrate dirt and stains on the concrete substrate. If the temperature exceeds 95° F or conditions are windy, the chemistry may react and dry before penetrating dirt or stains on substrate. In such circumstances, keep floors hydrated with water for recommended dwell time. Humidity also plays a role in the dry time. Product applied to a dry slab of concrete in an arid climate will dry faster than to a dry slab of concrete in a humid climate due to the amount of humidity present in the air. In dry climates with low humidity it may be necessary to hydrate the slab in order to allow for proper dwell time. Please consult a Green Umbrella™ representative if you have any questions.

For Best Results:

Light foot traffic Until dry or 1 hour
Wheeled traffic 3 hours

Maintenance

IMPORTANT: Only use pH neutral cleaner.

Non-GHP Floors (GHP)

- Regularly sweep away debris
- Regularly use a water broom to remove dirt build up from treated concrete surfaces

GHP Floors

- Regularly sweep away debris
- Regularly auto-scrub or mop with water or Green Umbrella™ Green Clean
- Use Green Umbrella™ Degreaser as needed
- For GHP floors periodically burnish with a weighted, high speed propane burnisher using Green Umbrella™ black pad to remove dirt build up and restore gloss



Facility Maintenance Training:

www.GreenUmbrellaSystems.com/contact

Warranty & Limitations

If densified. For a period of ten(10) years beginning the date on which the concrete surface described is treated with GREEN UMBRELLA™ products, GREEN UMBRELLA™ warrants to the owner that after the specified completed installation, the treated surface will remain water resistant, dust proof, hardened, and abrasion resistant. In the event the surface fails to perform, GREEN UMBRELLA™ will at its own expense and its own discretion, supply either sufficient product(s) to repair any such failure, or provide materials cost reimbursement. A manufacturer's representative must be on site to supervise installation.

GU COLORFLASH Warranty: This product is manufactured only for use by trained and licensed contractors and installers who have been trained in the proper use of this product. The manufacturer guarantees that the product will be of consistent color and mixture when received. The manufacturer has no control over the use of this product; therefore, no warranty, expressed or implied, is or can be made to either the effects or results of such use. In any case, the sellers and manufacturer's obligation under this warranty shall be limited to refunding the purchase price or replacing material proven defective.

It is the responsibility of the contractor to follow all directions and requirements as outlined in the GREEN UMBRELLA™ installation specifications. A completed Job Survey form must accompany this warranty request.

GREEN UMBRELLA™ Companies (GU) solely and expressly warrants that its products shall be free from defects in materials and workmanship for six months from the date of purchase. Unless authorized in writing by an officer of GREEN UMBRELLA™, no other representations or statements made by GREEN UMBRELLA™ or its representatives, in writing or orally, shall alter this warranty. GREEN UMBRELLA MAKES NO WARRANTIES, IMPLIED OR OTHER

WISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME.

GREEN UMBRELLA™ APPLIED TO SUBSTANDARD CONCRETE IS EXCLUDED FROM ANY KIND OF WARRANTY. If any GREEN UMBRELLA™ product fails to conform to this warranty, GREEN UMBRELLA™ will replace GREEN UMBRELLA™ product at no cost to the Buyer. Replacement of any product shall be the sole and exclusive remedy available and the buyer shall have no claim for incidental or consequential damages. Any installation of GREEN UMBRELLA™ products that fails to conform to such installation information and instructions shall void this warranty. Product demonstrations, if any are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining suitability of GREEN UMBRELLA™ products for the Buyers intended purposes.

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