

Gemstone Diamond Deck™ (Dark)

Colored-quartz-filled cementitious decorative coating

Description

Gemstone Diamond Deck™ coating is a three-component polymer-modified cementitious coating. It is used to protect and beautify concrete, mortar, and masonry. It should be used only as a topcoat over Gemstone Base Flex.

Yield

Approximately 125 – 225 ft² (11.6 – 20.9 m²) per batch when applied at 1/16" thickness (1.5 mm). 4 to 5 quarts (4.8 L) of Part A mixed with a 32 lb (14.6 kg) bag of Part B (dark color powder) and 18 lb (8.2 kg) pail of Part C (dark color quartz) will yield approximately 4 gallons (15.0 L) of mixed material.

Packaging

Part A, liquid polymer: 5 gallon (18.9 L) pail.
Part B, (dark powder) 32 lb (14.6 kg) multi-wall bags.
Part C, (dark color quartz blend), 18 lb (8.2 kg) pail.

Color

Available in a 7 standard dark colors; cocoa, dark sandstone, dark brownstone, dark graystone, dark terra cotta, dark teal, dark bluestone.

Features

- Colored quartz blend in pail
- Variety of designs and patterns using taped patterns, stencils, and colored quartz
- Preblended quartz
- Forms a protective surface

Benefits

- Ensures color consistency
- Wide range of decorative styles
- Easy mixing and application
- Protects concrete surfaces from environmental contaminants

Shelf Life

1 year when properly stored.

Storage

Store in unopened containers in clean, dry conditions between 45 to 90° F (7 to 32° C).

Where to Use

APPLICATION

- As a topcoat over Gemstone Base Flex.
- To protect and beautify structures
- To provide a uniform color and appearance
- Pool decks
- Patios
- Walkways
- Balconies
- Plaza decks

LOCATION

- Horizontal and vertical surfaces
- Interior and exterior

SUBSTRATE

- Over new and repaired concrete
- Over urethane membranes

How to Apply

Surface Preparation

1. Perform surface preparation in compliance with ICRI Technical Guideline No. 03732 "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays."
2. Remove all deteriorated concrete. Substrate should be structurally sound, fully cured, clean, and free of all oil, dirt, and contaminants. Roughen the surface by mechanical methods, such as sandblasting, waterblasting, shotblasting, or other suitable means. Do not use a method of surface preparation that will fracture the concrete. Verify the absence of microcracking or bruising in accordance with ICRI Guideline No. 03732.
3. Fill, repair, and level any damaged areas deeper than 1/8" (3 mm) before the application of coating. Any cracks in the substrate must be repaired before the application of the coating; if they are not properly repaired, they will reflect through it. An alternative to crack repair is to strategically work the crack into the design (e.g., use the cracks to enhance a stone pattern). Contact your local Gemstone representative for information on repair products.

Technical Data

Composition

Gemstone Diamond Deck™ coating is a proprietary blend of cement, polymer, graded aggregate, colored quartz, and additives.

Typical Properties

PROPERTY	VALUE
Mix ratio , lb to gal (kg to L) (Part B & Part C(dry) to Part A (resin), (22.7 to 5.7) approximate; premeasured	50 to 1.25
Working time , min, at 70° F (21° C)	30
Recoat time , hrs	2

Test Data

PROPERTY	RESULTS	TEST METHODS
Elcometer adhesion (0% bond loss)	100% substrate failure	ASTM D 4541
Thermal compatibility , 5 cycles	No delamination	ASTM C 884
Ultraviolet resistance , 1,000 cycles	No yellowing	ASTM D 822
Freeze/thaw resistance , % RDM, 28 day, 300 cycles, composite	85	ASTM C 666-A
Scaling resistance , 50 cycles	No scaling	ASTM C 672
Abrasion Resistance , 28- day; Taber CS-10 Wheel		ASTM D 4060
Weight loss %		
3,000 cycles	0.003	
6,000 cycles	0.005	

Unless otherwise noted, test samples were cured 7 days at 73° F (23° C) and 50% relative humidity.

The data shown is based on controlled laboratory tests of sealed samples cured in air. Expect reasonable variations from the results shown, depending upon mixing equipment, temperature, application methods, test methods, and curing conditions. Mix entire unit (part A, part B, part C) of Gemstone Diamond Deck™ coating when preparing specimens for performance tests.

Surface Preparation (continued from page 1)

- Before the application of Gemstone Base Flex, the surface may need to be dampened with Gem Acrylic Resin. Spray or roll Gem Acrylic Resin at the rate of approx. 300 to 400 sq. ft. per gallon. If Gemstone Base Flex is not applied within 24 hours, re-apply Gem Acrylic Resin.
- Protect areas surrounding the installation site (walls, doors, plants). Using paper or plastic, cover wall to at least 18" (455 mm) above the prepared surface and tape securely.
- Honor any expansion and control joint, taping over them. If they are not taped but coated over, they must be recut after the coating application is completed (but before application of the sealer). Otherwise, the coating will crack when the substrate moves.

Mixing

- The recommended mix ratio is 1.0 – 1.5 gallons of Part A per 50 lb UNIT (dry mix) of 40 lb bag of Part B (light color powder) and 10 lb pail of Part C (light color quartz) OR, 32 lb bag of Part B (dark color powder) and 18 lb pail of Part C (dark color quartz).
- To obtain additional working time, add Gem Retardant and keep the Gemstone Diamond Deck™ coating bags and resin in a shaded area before mixing.
- Mechanically mix with a heavy-duty drill (400 – 600 rpm) and a Jiffy or similar paddle or use an appropriately sized mortar mixer. Pour approximately 80% of Part A (liquid polymer) into the mixing container. Slowly add Part B (powder) and Part C (colored quartz) during the first 30 seconds of mixing.
- After 1 minute of mixing, stop and scrape the sides of the container, then restart mixing. Continue mixing until a homogeneous and lump-free mixture is obtained. Total mix time should be a minimum of 3 minutes from the time Part B and Part C was added, and a maximum of 4 minutes. Depending on application, add remaining Part A as required for proper consistency.

IMPORTANT: Part A is specifically formulated for use with Part B and Part C. Do not use other liquid polymers. Only mix Part A with Part B and Part C.

Application

- Gemstone Diamond Deck™ coating should only be applied as a topcoat by means of spray equipment over surfaces that have already had Gemstone Base Flex coat applied. For detailed instructions on these products, please refer to their respective product bulletins.
- If a decorative pattern is desired, wait at least 2 hours, until the Gemstone Base Flex has sufficiently hardened, before applying either tape or stencils to the surface.
- Tape and honor all moving joints.
- Gemstone Diamond Deck™ can then be applied as the topcoat with spray equipment. When spraying, use a hopper gun, or Grayco texture sprayer, which are commonly used in plastering. Box all material for uniform color and consistency.

Application (continued from page 2)

5. When using spray equipment, have the same person perform all the spraying operations to maintain consistency. Always keep the spray gun moving to protect against unwanted buildup of material. Hold it approximately 2 – 3 ft (0.6 – 0.9 m) from the surface. When using non-adhesive stencils, point the spray gun perpendicular to the surface (straight down), not at an angle; this helps to prevent the material from being sprayed beneath the non-adhesive stencil.
 6. After the topcoat has been applied and the Gemstone Diamond Deck™ coating begins to set, knock down the surface using a good pool trowel. A swivel trowel bracket can be used to create a walking trowel for large jobs. (Kraft Supply Tool ID # CC658) This allows the colored quartz to reflect back through the surface.
 7. Remove tape or stencils shortly after the final coat or finish is done. Do not wait until the surface has totally hardened before removing the tape or stencils.
 8. After the surface has sufficiently hardened, broom and blow it off with air pressure before sealing. If the joints are not honed, the coating will crack when the substrate moves.
- IMPORTANT:** Apply only as much of the Gemstone Diamond Deck™ coating that can be finished in one(1) day, including sealer.(spray texture and sealer) Recommend stopping at inconspicuous area and easier to blend/restart the following day. Do not apply this coating if it will come in contact with moisture within 24 hours of the coating application or within 16 hours of the sealer application.

Sealing

1. After the final coat is dry to the touch and can no longer be marred, the coating must be sealed with either Gemstone G-100 clear sealer (solvent-based acrylic sealer), CS-388 sealer (water-based acrylic sealer), or Acryseal HS (solvent-based acrylic sealer).
2. Refer to the appropriate product data sheet for coverage rates.
3. Reseal the coating a minimum of every 2 years for best performance.

Curing

Gemstone Diamond Deck™ coating needs only to be air cured. Do not wet cure.

Clean Up

Clean all tools and equipment with water immediately after use. Cured material must be removed mechanically.

For Best Performance

- Precondition these materials to approximately 70° F (21° C) for 24 hours before using.
- Only use Part A in mixing with Pt B & Pt C. Part A is specifically formulated for use with Pt B & Pt C. Do not use other liquid polymers.
- Maximum application thickness for Gemstone Diamond Deck™ coating is 1/8" (3 mm).
- Gemstone Diamond Deck™ coating must be mixed to uniform consistency without lumps (3 minutes minimum). Do not overmix (4 minutes maximum).
- Do not use more than the recommended amount of Part A (liquid polymer).
- When spraying Gemstone Diamond Deck™ coating, apply in a continuous process, minimizing interruptions. If an extended interruption is necessary, clean out the hopper.
- Recommended ambient and substrate temperature range at the time of application is 50 to 90° F (10 to 32° C).
- Do not apply Gemstone Diamond Deck™ coating if it will rain within 24 hours of the coating application or within 16 hours of the sealer application.
- Do not use solvents to clean this system.
- Coverage will depend on texture and condition of substrate and method of application. Install a controlled test area to determine the total amount of material needed given jobsite conditions.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-969-1998) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by Gemstone personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.
- For best results, only use Ultra Sealant by Master Builders for cant beads and control joints.

Health and Safety

GEMSTONE DIAMOND DECK™ PART A

Caution

GEMSTONE DIAMOND DECK™ PART A contains no hazardous materials as defined by 29 CFR.1910.1200 or WHMS.

Risks

May cause eye irritation. May cause skin irritation. **Precautions**

KEEP OUT OF THE REACH OF CHILDREN. Use chemical safety goggles, impervious gloves and protective clothing. The contents of this package must be blended with other components before the product may be used. Any mixture of components will have hazards of both components. Before opening the packages, read all warning labels. Follow all precautions.

First Aid

In case of eye contact, flush immediately with plenty of water for 15 minutes and call a physician. For skin, wash thoroughly with soap and water. If swallowed, DO NOT induce vomiting. Have victim drink water if conscious. Obtain medical attention immediately. DO NOT give anything to an unconscious person.

For additional information on personal protective equipment, first aid, and emergency procedures, refer to the product Material Safety Data Sheet (MSDS) on the job site or contact the company at the address or phone numbers given below.

Proposition 65

This product does not knowingly contain materials listed by the state of California as known to cause cancer, birth defects, or reproductive harm.

VOC Content

0 lbs/gal or 0 g/L., less water and exempt solvents when all components are mixed and applied per manufacturer's instructions.

GEMSTONE DIAMOND DECK™ PART B & PART C

Warning!

GEMSTONE DIAMOND DECK™ PART B and PART C contains crystalline quartz silica, portland cement and titanium dioxide.

Risks

Eye irritant. Skin irritant. Causes burns. Lung irritant. May cause delayed lung injury.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with eyes. Wear suitable protective eyewear. Avoid prolonged or repeated contact with skin. Wear suitable gloves. Wear suitable protective clothing. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. Wash soiled clothing before reuse.

First Aid

Wash exposed skin with soap and water. Flush eyes with large quantities of water. If breathing is difficult, move person to fresh air.

Waste Disposal Method

This product when discarded or disposed of is not listed as a hazardous waste in federal regulations. Dispose of in a landfill in accordance with local regulations.

For additional information on personal protective equipment, first aid, and emergency procedures, refer to the product Material Safety Data Sheet (MSDS) on the job site or contact the company at the address or phone numbers given below.

Proposition 65

This product contains materials listed by the state of California as known to cause cancer, birth defects, or reproductive harm.

VOC Content

0 lbs/gal or 0 g/L less water and exempt solvents when all components are mixed and applied per manufacturer's instructions.

**For medical emergencies only,
call ChemTrec (1-800-424-9300).**

GEMSTONE SYSTEMS, INC.

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Customer Service 800-969-1998

Technical Service 800-969-1998



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