DURA-KOTE EPOXY 100 CLEAR COAT

SURECRETE DESIGN PRODUCTS

PACKAGING
3 gal. (11.4 L) kit
15 gal. (56.8 L) kit

MIXING RATIO
2:1 / 2 part A to 1 part B

COVERAGE
Varies widely (40 – 150 ft²) per system selected, porosity of concrete, and condition of substrate
As color coat: approximately 100 – 150 ft² per gal. (9.3 – 13.9 m² per 3.8 liter) 10.7 – 16 mils
For thick build: 40 – 70 ft² per gal. (3.7 – 6.5 m² per 3.8 liter) 23—40 mils

SHELF LIFE
Under normal, moisture free conditions, 12 months for unopened container

DESCRIPTION

Dura-Kote Epoxy 100 Clear Coat is a 2 component 100% solids, zero VOC floor coating system that is used in a wide variety of applications: high build clear coat for a host of decorative concrete systems. Yellowing and blush are minimized by the use of a Cycloaliphatic Amine curing agent for part B, providing the premium, durable clear coating for colored or stained concrete and cement based overlays. The high performance, self-leveling characteristics generate the premier balance of strength, flexibility, and chemical resistance that is both user-friendly and extremely durable. ***Dura-Kote Epoxy 100*** is ideally suited for any commercial or residential setting: manufacturing facilities, warehouses, bars, clubs, retail stores, automotive showrooms, residential interiors, garage floors, gyms, locker rooms, stadiums, or anywhere that an exceedingly resilient floor is desired.

SUREFACE PREP

The principles for surface preparation for ***Dura-Kote Epoxy 100*** are aligned with other overlay systems placed on concrete and remain constant; the substrate must be:

1. Clean: The surface must be free of dust, dirt, oil, grease, paints, glues, sealers, curing agents, efflorescence, chemical contaminants, rust, algae, mildew and other foreign matter that may serve as a bond breaker or prevent proper adhesion. To remove coatings, paint, sealers, glue from concrete, etc. best results are achieved through diamond grinding.

2. Cured: Any concrete must be sufficiently cured to have complete hydration, approximately 28 days depending on temperatures and humidity.

3. Sound: No system should be placed on flaking or spalling concrete. If the surface is delaminating, or divots are present, then diamond grinding or other mechanical means should be used to remove the delaminating areas. Depending upon size of area, patching may be required prior to application of ***Dura-Kote Epoxy 100***. ***SureBroom*** or ***Deep Level*** are excellent patching products to complement the system. Refer to their respective spec. sheets. Also, cracks may require treatment: evaluate crack as static or structural to set expectation of treatment. Refer to spec. sheet on ***SCT-22 Crack and Spall Treatment***.
Construction Joints in concrete may have sufficient movement to "telegraph" through the ***Dura-Kote Epoxy 100***. Large expansive slabs should have planned appropriate flexible caulks to allow for this movement and prevent bridging of ***Dura-Kote Epoxy 100*** across either side of the construction joint.

4. Profiled: For a proper bond, the surface of concrete must be opened up or roughed up to feel like 80 – 120 grit sandpaper. This profile is best accomplished through diamond grinding or shot blasting. Proper profile should follow the standard established by the International Concrete Repair Institute (ICRI) Technical Guideline no. 03732 for Concrete Surface Profile (CSP). The established profile is categorized as CSP-2 or CSP-3.

5. Limit Moisture: Since ***Dura-Kote Epoxy 100*** is not vapor permeable and due to the uncertainty of vapor barriers placed beneath concrete, testing prior to application is appropriate.

a. Plastic sheet test (ASTM-D-4263) can often identify excessive moisture vapor transmission. Tape all 4 sides of an 18" (45 cm) square of clear plastic to the slab and leave in place for 16 hours. Any condensation formed or darkening of the slab beneath the plastic indicates the surface is too wet for an epoxy.

b. Calcium Chloride test (ASTM-F-1869) will quantify the amount of moisture that is transmitted to surface of the slab. The moisture measurement is expressed in terms of pounds (kg) per 1,000 ft² (m²) per 24 hours. Measurements that are in excess of 3 pounds per 1,000 ft² (1.4 kg per 100 m²) over 24 hours are too wet for an epoxy. Follow directions of test kit manufacturer.

Note: these observations and measurements may be inherently flawed as they are "snapshots in time". These tests serve only as guidelines.

TEMPERATURE/CURE

Whenever practical, this system should be applied in conditioned spaces, as temperature extremes (hot or cold) and high humidity are problematic. Avoid application on extremely hot days or during wet, foggy weather. Basic rules include:

- Apply in ambient and surface temperatures ranging above 50°F (10°C) and below 90°F (32°C) and that will remain within ranges for at least 12 hours
- Surface temperature must be a minimum 5°F (3°C) above dew point
- Relative humidity should be below 75%

Cold temperatures slow the cure rate. To illustrate:

Cure Rates @ 77°F (25°C)	*Cure Rates @ 50°F (10°C)*
Dry to touch = 4 – 5 hrs	Dry to touch = 18+ hrs
Light traffic = 16 hrs.	Light traffic = 30 hrs.
Full cure = 5 – 7 days	Full cure = 14 days

Conversely hot temperatures speed the cure rate.

TECHNICAL DATA SHEET

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Dade City, Fl 33523
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APPLICATION

Due to its versatility within numerous systems, it is difficult to define 1 specific way of application. For the ***Dura-Kote Epoxy 100 Clear Coat,*** what follows are commonly utilized techniques. Mask all areas requiring protection; product will stick to just about everything.

Mixing and handling

1. Organize mixing station that neither has to relocate, nor block the progress of application. Staging is critical so that Part A and part B are not confused with one another or mixed too far in advance. Once A and B are mixed, the catalyzed product should be placed on the floor immediately. If left in the pail too long, product will cure at an accelerated rate rendering it useless.
2. Pour 2 parts A into appropriately sized vessel (usually 5 gal. [18.9 liter] pail for the 3 gal. [11.4 liter] kit). Exercise care to avoid pouring product down the sides of the pail, as this will be difficult to mix with part B.
3. Pour 1 part B into the same pail over the 2 parts A. Again exercise care to avoid pouring product down the sides of the pail.
4. Mechanically mix both parts A and B with "Jiffy" style mixer blade for 3 minutes at medium speed.
5. Pour contents completely out in a fairly long trail for application. Any unused portion left in the pail can cure at an accelerated rate rendering it useless.
6. Do not leave pail upside down to drain onto floor. Any unmixed portion of A or B that may have accidentally been placed onto side of pail can now drain down onto the floor, creating a spot that will not cure.
7. Clean out or replace mixing pails and mixer blades in a reasonable fashion, so that the chemistry of A and B remain consistent, especially over large projects.

Primer coat

1. Spiked shoes are required throughout application.
2. Select spreader
- **a.** For high build to cover small holes and imperfections in floor (e.g. blow-outs from carpet tack strip), a notched squeegee or gauge rake may be appropriate.
- **b.** For a tighter coat, a squeegee or a roller ranging in nap size from mohair to 3/8" may be appropriate.
- **c.** Rollers should be premium quality with phenolic core.
- **d.** "De-fuzz" roller by wrapping tightly with masking tape and removing tape.
- **e.** Large areas may require 18" rollers and wider squeegees.

3. Tracking coverage rate for each 3 gal. (11.4 liter) kit is important. After establishing room dimensions, before mixing commences place a short piece of masking tape on the wall to correspond to the "distance" one kit should cover.
4. Spread product evenly over area. Areas adjacent to walls may be "cut in" by brush.
5. Backroll the primer coat after achieving the appropriate coverage north to south. For higher build application follow with backrolling then east to west.
6. Torch: Utilizing a propane torch designed for roofing or weed control gently heat up the surface to release some bubbling caused by out gassing and air entrapment in the concrete. Use a constant sweeping motion and do not scorch the surface by concentrating the flame in a single spot.
7. Dry and cure sufficiently to proceed to next step (approximately 8 – 10 hours).

Note: Primer coat may "stand alone" as a single coat depending upon application system selected, or applicator and client choice. Or a single coat of ***Dura-Kote Epoxy 100*** *may proceed to a finish coat of another* ***Dura-Kote*** *product as described later in this spec. sheet.*

Top Coat

1. Clean: The primer coat should be screened with a 100 grit sanding screen on a rotational floor machine. This scuffing will ensure not only a good bond between coats, but also eliminate any debris or dust particulates that may have settled onto the primer coat as it was curing. Follow screening with vacuuming. Follow vacuuming with a micro-fiber wipe with denatured alcohol.
2. Repeat all steps of application listed above. Masking, mixing and handling are identical in top coat. Top coat applies exactly as primer coat described above.
Note: The Top coat does not have to absolutely have a finish coat placed over it. However, some areas requiring slip resistance additive may dictate that a finish coat be utilized.

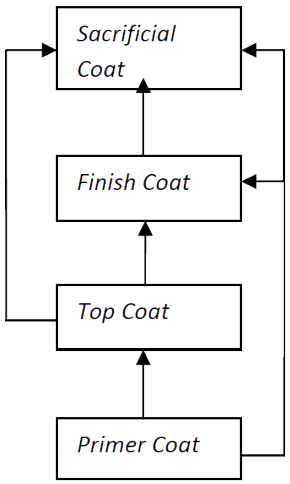
Finish Coat

For superior abrasion and added chemical resistance the final coat of ***Dura-Kote Epoxy 100*** should be protected by a finish coat. There are several choices that have varying advantages:
- ***Dura-Kote Polyurethane Solvent Based Clear Gloss*** – high gloss
- ***Dura-Kote Polyurethane Water Based Clear Gloss*** – low VOC
- ***Dura-Kote Polyurethane Water Based Clear Satin*** – tone down the gloss
- ***Dura-Kote PFC 120 Hybrid Solvent Based Polyaspartic*** – quick dry

The final top coat should be screened with a 100 grit sanding disc on a rotational floor scrubbing machine. This scuffing will ensure not only a good bond between coats, but also eliminate any debris or dust particulates that may have settled as the primer coat was curing. Follow screening with vacuuming. Following vacuuming with a micro-fiber wipe with denatured alcohol. For specific directions on finish coat refer to the appropriate spec. sheet.

Sacrificial Coat

A sacrificial coat is not required, but will add further protection to the finished product. This coat may be applied at any step following a "stand alone" primer coat. ***SureFinish*** provides the protective sacrificial coat and is available in gloss and matte, as a simple mop on product. Reference the spec. sheet.



SLIP RESISTANCE

Two recognized US agencies have issued directives on minimum coefficient of friction, OSHA (Occupational Safety and Health Administration) and Department of Justice through the ADA (Americans with Disabilities Act). ADA is the most stringent of the two. ADA directs that accessible walkways have a minimum coefficient of friction of 0.6. Ramps have been directed to be 0.8. The applicator assumes the responsibility to meet these standards. Especially surfaces that may become wet, oily, or greasy require attention. Refer to spec. sheets on ***SureGrip (Additive)*** and its accompanying coefficient of friction table.

SUITABILITY SAMPLE

Always prepare an adequate number of test areas, including wear protection system and aesthetic suitability for products' intended use.

CLEAN-UP

Before ***Dura-Kote Epoxy 100*** dries; spills and tools can be cleaned up with a solvent such as denatured alcohol.

DISPOSAL

Contact your local government household hazardous waste coordinator for information on disposal of unused product. Upon curing, left over catalyzed product is not hazardous.

LIMITATIONS

For use by trained professionals, having read the complete MSDS. Strictly interior use, upon well drained concrete slab with appropriate vapor barrier, subject to no hydrostatic pressure.

WARRANTY

Warranty of this product, when used according to the directions, is limited to refund of purchase price, or replacement of product (if defective), at manufactures/seller's option. SureCrete Design Products shall not be liable for cost of labor or direct and/or incidental consequential damages.

CAUTIONS

KEEP OUT OF REACH OF CHILDREN. Keep areas ventilated to prevent the accumulation of vapors. **Inhalation:** Avoid prolonged breathing of vapors. Use NIOSH approved respirator for organic vapors if threshold limit values are unsafe. **Skin Contact:** Skin contact may cause irritation. Remove contaminated clothing and wash affected skin with soap and water. Launder clothing before reuse. If symptoms persist, seek medical attention. **Eyes:** Wear safety eye protection when applying. Contact with eyes may cause irritation. Flush eyes with water for 15 minutes. If symptoms persist, seek medical attention.

TEST DATA

Appearance (cured)	Gloss sheen
Water Resistance	Excellent, beads water
Mechanical Stability	Excellent
Light Stability	Yellows
Adhesion	400 psi (concrete failure)
Abrasion resistance: Tabor/	1000 gm. load @ 500 cycles = 31mg loss
Compressive strength:	9000 psi
Solids	100%
Storage Stability	1 yr.
Appearance (wet)	Clear – Straw color
Odor	Epoxy
Application Temperature	50°F – 90°F
VOC content	0
Set to Touch	4 -5 hours
Pot life	10 -20 minutes

CHEMICAL RESISTANCE

MEK (methyl ethyl ketone)	not recommended
Xylene -	8 hours splash spill
Gasoline –	2 hours splash spill
Butanol -	8 hours splash spill
1,1,1 trichloroethane -	2 hours splash spill
Methanol -	not recommended
Ethyl alcohol -	8 hours splash spill
Skydrol -	2 hours splash spill
10% sodium hydroxide –	long term immersion
50% sodium hydroxide –	72 hour immersion
Acetic acid 5% -	2 hours splash spill
10% sulfuric acid –	8 hours splash spill
70% sulfuric acid –	not recommended
10% hydrochloric acid –	8 hours splash spill
20% nitric acid –	not recommended
Ethylene glycol –	8 hours splash spill

TECHNICAL DATA SHEET