DURA-KOTE METALLICS

SURECRETE DESIGN PRODUCTS

PACKAGING
1—pint (.47 liter) container
20 – colors

MIXING RATIO
1—pint (.47 liter) metallics to
3—gals. (11.4 liter) epoxy kit

COVERAGE
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 Metallics are an exciting new seamless flooring system that provides a unique three dimensional appearance with suspended reflective pigments. There are 20 available reflective pigments that can combine with literally 100's of colors in the ***Dura-Kote Epoxies***. Due to the vast options offered within this system, one can create floors that range from the elegantly stylish to outrageously bazaar. The exceptionally durable epoxy combined with a polyurethane/polyaspartic top coat make this flooring system ideally suited for nearly any commercial or residential setting. Outstanding customization properties make ***Dura-Kote Metallics*** especially appealing for bars, clubs, retail stores, automotive showrooms, residential interiors, garage floors, or anywhere that a one of a kind, exceedingly resilient floor is desired.

SUREFACE PREP

The principles for surface preparation for ***Dura-Kote Metallics*** 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 & 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 & 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 Metallics***. ***SureBroom*** or ***Deep Level*** are excellent patching products to complement the system. Refer to their respective spec. sheets. Also, cracks my 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 Metallics***. Large expansive slabs should have planned appropriate flexible caulks to allow for this movement and prevent bridging of ***Dura-Kote Metallics*** 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. 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 Metallics*** are 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

15246 Citrus Country Drive
Dade City, Fl 33523
www.SURECRETEDESIGN.com

APPLICATION

Primer Coat

While not required, a black or very dark primer coat is the most popular selection due to the property of light absorption that enhances the reflectivity of ***Dura-Kote Metallics***. Primer coats may be either ***Dura-Kote Pigmented Epoxy 100*** or ***Dura-Kote Pigmented WB Epoxy***.

Some applicators may elect to use ***Dura-Kote Pigmented WB Epoxy*** for its simplicity in placement and increased square footage coverage, as it is applied in a thinner millage.

For floors having numerous small holes or divots (e.g. blow-outs from carpet tack strip), ***Dura-Kote Pigmented Epoxy 100*** can fill and "self-level" across the areas that would otherwise require patching, as it can be applied in much thicker millage. For specific directions on primer coat refer to the appropriate spec. sheet.

After primer coat has dried and cured sufficiently (approximately 8 – 10 hours) the application of the metallic coat is ready.

Metallic 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. Mixing and handling:

a. 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.

b. 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.

c. Shake the 1 pint (.47 liter) container of ***Dura-Kote Metallics*** and empty the entire container to either 2 parts A or 1 part B of the epoxy. Exercise care to empty container into the liquid and not onto the sides of the pail.

d. Mechanically mix for 3 minutes with "Jiffy" style mixer blade.

e. 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.

f. Mechanically mix both parts A and B with "Jiffy" style mixer blade for 3 minutes at medium speed.

g. Pour contents completely out in a fairly long trail for application. Any unused portion left in the pail will cure at an accelerated rate, rendering it useless.

h. 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.

i. 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.

3. Spreading:

a. Spiked shoes are required throughout application.

b. Select spreader

i. Notched squeegee or gauge rake may be appropriate.

ii. Roller ranging in nap size from mohair to 3/8" may be appropriate.

iii. Rollers should be premium quality with phenolic core.

iv. "De-fuzz" roller by wrapping tightly with masking tape and removing tape.

v. Large areas may require 18" rollers and wider squeegees.

c. 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. Coverage rate should be 40 – 70 ft² per gal. (3.7 – 6.5 m² per 3.8 liter) or 23 – 40 mils. This coverage rate will create the 3-D reflective properties desired. Less epoxy millage is substandard; more epoxy millage is wasteful.

d. Spread product evenly over area. Flatten the poured out trail into place, as it "self-levels." Areas adjacent to walls may be "cut in" by brush.

e. Backroll the metallic coat after achieving the appropriate coverage, north to south, then east to west.

f. Randomly swirl the metallic coat with a smaller roller in no particular fashion. The swirling motion will "soften" as the pigments settle into a pleasing patina. Working time for this process is approximately 15 – 20 minutes

g. Time the mixes so that stages are consistently aligned. For example, if the first 3 gal. (11.4 liter) kit of metallic coat was placed and randomly swirled within 10 minutes, the second 3 gal. (11.4 liter) kit should be placed in the same time frame so that they would not appear drastically different.

h. Dry and cure sufficiently to proceed to next step (approximately 8 – 10 hours).

Finish Coat

For superior abrasion and chemical resistance the metallic coat should be protected by a finish coat. There are several choices that have varying advantages:

- ***Dura-Kote Polyurethane Solvent Base Clear Gloss*** – high gloss
- ***Dura-Kote Polyurethane Water Base Clear Gloss*** – low VOC
- ***Dura-Kote Polyurethane Water Base Clear Satin*** – tone down the gloss
- ***Dura-Kote PFC 120 Hybrid Solvent Based Polyaspartic*** – quick dry

The metallic 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.

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 Metallics*** dry; 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.

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