

DURA-KOTE

PIGMENTED Epoxy WB



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<http://www.surecretedesign.com/pigmented-water-based-epoxy/>

DURA-KOTE PIGMENTED EPOXY WB

DESCRIPTION

Dura-Kote Pigmented Epoxy WB is a 2 component 52% solids, low VOC floor coating system that is used in a wide variety of applications: durable pigmented coating for both new and old interior concrete floors, primer coat, and binder for **Dura-Kote Flakes** and **Metallics**. The high loading of SureCrete pigments achieve the preferred substrate hide and tint uniformity in 100's of colors. **Dura-Kote Pigmented Epoxy WB** generates the premier balance of strength, flexibility, and chemical resistance, all in a low odor, low VOC formulation. Unlike nearly all epoxies, **Dura-Kote Pigmented Epoxy WB** has remarkable properties related to moisture:

- Withstands high vapor transmission rate, up to 13 pounds per 1,000 ft² (5.4 kg per 100m²) in 24 hours.
- Provides a non-permeable vapor barrier, even in basements.
- Applies on fresh concrete as soon as three days after pouring and placing concrete.

Applications range from manufacturing facilities, warehouses, bars, clubs, retail stores, automotive showrooms, hospitals, medical centers, residential interiors, garage floors, gyms, locker rooms, stadiums, or anywhere that an exceedingly resilient floor is desired.

SURFACE PREP

The principles for surface preparation for **Dura-Kote Pigmented Epoxy WB** are aligned with other coatings 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 or shot blasting.

2. Cured: Any concrete must be cured approximately 3 days. Cement based overlays typically cure sufficiently within 1 day.

3. Sound: No system should be placed on flaking or spalling concrete. If the surface is delaminating, or divots are present, then diamond grinding, shot blasting 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 Pigmented Epoxy WB**. **Flash Patch** or **Deep Level** is an excellent choice for a patching product 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 Pigmented Epoxy WB**. Large expansive slabs should have planned appropriate flexible caulks to allow for this movement and prevent bridging of **Dura-Kote Pigmented Epoxy WB** across either side of the construction joint.



PACKAGING

- 2 gal. (7.6 liter) kit
- 2 – 1 gal. (3.8 liter) short filled pails containing 3.2 qt. (3 liter) part A (pigmented)
- 2 – 1 qt. (.95 liter) short filled cans containing .8 qt. (.8 liter) part B

OR

- 5 gal. (18.9 liter) kit
- 1 – 5 gal. (18.9 liter) short filled pail containing 4 gal. (15 liter) part A (pigmented)
- 1 – 1 gal. (3.8 liter) pail part B

30 standard colors
198 additional colors available through some distributors

MIXING RATIO

4:1 (4 part A to 1 part B)

COVERAGE

Varies due to porosity of substrate
As 1st coat approximately 125 - 175 ft² per gal. (11.6 -16.3 m² per 3.8 liter) 9 – 13 mils wet; 4.7 – 6.8 mils cured
For smooth surface or second coat approximately 200 -250 ft² per gal. (18.6 - 23.2 m² per 3.8 liter) 6.4 - 8 mils wet; 3.3 – 4 mils cured

SHELF LIFE

Under normal, moisture free conditions 12 months for unopened container. **Dura-Kote Pigmented Epoxy WB** should not be exposed to freezing temperatures.

4. Profiled:

a. Concrete: 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.

b. Finish or Top Coat: Screen the preceding coat with a 100 grit sanding screen on a rotational floor machine. This screening will ensure not only a good bond between coats, but also eliminate any debris or dust that may have settled onto the preceding coat as it was curing. Follow screening with vacuuming. Follow vacuuming with a micro-fiber wipe with a solvent such as xylene or acetone. Listed below are some common systems requiring a **Finish or Top Coat**:

- **Dura-Kote Pigmented Epoxy 100**
- **Dura-Kote Pigmented Epoxy WB**
- Any other **Dura-Kote specialty system**

5. Understand Moisture: While **Dura-Kote Pigmented Epoxy WB** is not vapor permeable, it has some remarkable characteristics, unlike nearly all epoxies:

- May apply upon fresh concrete as soon as three days after pouring and placing concrete.
- Withstands high vapor transmission rate, up to 13 pounds per 1,000 ft² (5.4 kg per 100m²) in 24 hours. This means it can be applied to concrete where more than a normal amount of moisture is present. 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 13 pounds per 1,000 ft² (5.4 kg per 100 m²) over 24 hours are too wet for application. Follow direc-

tions of test kit manufacturer. Note that a measurement may be inherently flawed as it is a "snapshot in time". A test serves only as guidelines.

- Provides a non-permeable vapor barrier, even in basements. hours are too wet for polyaspartic. Follow directions of test kit manufacturer.

TEMPERATURE/CURE

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.

Cure Rates @ 77°F (25°C)

Dry to touch = 4 - 5 hrs.

Light traffic = 16 hrs.

Full cure = 5 - 7 days

Cure Rates @ 50°F (10°C)

Dry to touch = 18+ hrs.

Light traffic = 30 hrs.

Full cure = 14 days

APPLICATION

Planning

1. Select appropriate PPE (personal protection equipment). Provide adequate ventilation. Refer to MSDS.
2. Work across the narrowest dimension of an area where practical.
3. Work to an exit from wet product.
4. To track coverage rate for each kit, after establishing room dimensions, before mixing commences, place a short piece of masking tape on the wall to correspond to the "distance" one premeasured kit should cover.

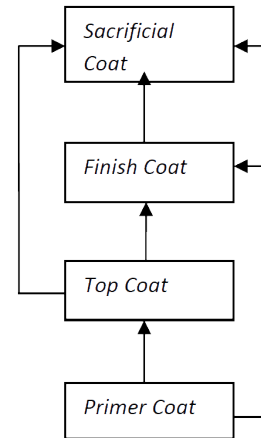
Mask all areas requiring protection; product will stick to just about everything.

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. Mechanically mix part A with "Jiffy" style mixer blade for 3 minutes at medium speed to insure pigment dispersal.
3. Pour 1 part B into 4 parts A. Note that kits are premeasured for convenience. Exercise care to avoid pouring product down the sides of the pail, as this will be difficult to mix.
4. Mechanically mix both parts A and B with "Jiffy" style mixer blade for 3 minutes at medium speed. Jiffy mixer at medium speed will help prevent air entraining.
5. You may thin **Dura-Kote Pigmented Epoxy WB** after it has been catalyzed with water up to 15% (19oz per gallon), to enhance absorption when porous conditions require more penetration. Note thinning may also reduce color hide.
6. 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.
7. 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.
8. Clean out or replace mixing pails, mixer blades, and roller covers in a reasonable fashion, so that the chemistry of A and B remain consistent, especially over large projects.

Note: Due to its versatility within numerous systems, it is difficult to define 1 specific way of application of "Coats". What follows are commonly utilized techniques. The sequence of application and the identification of "Coats" shall follow the ladder chart below. Begin with bottom box; proceed upward. For the **Dura-Kote Flakes** and **Dura-Kote Metallics** be certain to refer to the appropriate spec. sheet.

Ladder Chart for application of Coats



Primer Coat

1. Spiked shoes are required throughout application.
2. Select spreader
 - a. A squeegee or a roller ranging in nap size from mohair to 3/8" (9.5 mm) may be appropriate.
 - b. Rollers should be premium quality with phenolic core.
 - c. "De-fuzz" roller by wrapping tightly with masking tape and removing tape.
 - d. Large areas may require 18" (46 cm) rollers and wider squeegees
3. Spread product evenly over area. Areas adjacent to walls may be "cut in" by brush.
4. Backrolling: After achieving the appropriate coverage, begin progressively backrolling *Primer Coat*. Roller covers will require replacing periodically to prevent catalyzed product from setting up on roller cover or contaminating more freshly placed material.

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 Pigmented Epoxy WB** may proceed to a *Finish Coat* of another **Dura-Kote** product as described later in this spec. sheet (see ladder chart above.)

Top Coat

If the *Primer Coat* has cured dry to the touch, and is no longer tacky (refer to cure rates listed above as a guide) repeat all steps of application listed above. Planning, masking, mixing and handling, and application are identical in *Top Coat*.

If the *Primer Coat* has cured beyond 12 - 24 hours or if dust or debris has settled into it as it cured, it must be screened with a rotational floor machine equipped with a 100 grit sanding screen. Follow screening with vacuuming. Follow vacuuming with a micro-fiber wipe with a solvent such as acetone, or denatured alcohol.

Note: The *Top Coat* may complete the project, and does not necessarily require a *Finish Coat* (see ladder chart above.) However, for enhanced durability and chemical resistance, a *Finish Coat* may be selected. Additionally, a *Finish Coat* may become the "carrier" for slip resistant agents for areas that may become wet, oily, or greasy when brought into service.

Finish Coat

There are several choices that have varying advantages for the *Finish Coat*:

- **Dura-Kote Polyurethane SB (gloss)** – high gloss
- **Dura-Kote Polyurethane WB (gloss)** – low VOC
- **Dura-Kote Polyurethane WB (satin)** – tone down the gloss
- **Dura-Kote PFC-120** – quick dry
- **Dura-Kote PFC-180** – quick dry, moderate build
- **Dura-Kote Epoxy WB** – unique moisture properties

If the *Top Coat* has cured dry to the touch and is no longer tacky (refer to cure rates listed above as a guide) repeat all steps of application listed above. Planning, masking, mixing and handling, and application are identical for *Finish Coat*.

If *Top Coat* has cured beyond 12 -24 hours or if dust or debris has settled into it as it cured, it must be screened with a rotational floor machine equipped with a 100 grit sanding screen. Follow screening with vacuuming. Follow vacuuming with a micro-fiber wipe with a solvent such as xylene, acetone, or 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. The *Sacrificial Coat* may be applied at any step following a “stand alone” *Primer Coat* (see the ladder chart above.) **SureFinish** provides a protective *Sacrificial Coat*, a measure of slip resistance, and is available in gloss and matte, as a simple mop on product.

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 more 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. Areas that may become wet, oily, or greasy require special attention. Refer to spec. sheets on **SureGrip (Additive)** and its accompanying coefficient of friction table.

SUITABILITY SAMPLE

Due to condition specific sites, always prepare an adequate number of test areas. Wear protection system and aesthetic suitability for products’ intended use should be included. On site sample approval is especially critical on substantial, heavy traffic situation or custom coloration.

CLEAN-UP

Before **Dura-Kote Pigmented Epoxy WB** dries; spills and tools can be cleaned up with a solvent such xylene or acetone.

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 that have read the complete MSDS. Product is strictly for interior use, upon well drained concrete slab with appropriate vapor barrier. Not compatible with metal wheel traffic or some furniture where point of contact exponentially increases psi (kPa)

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.

PROPERTIES

Appearance (cured)	Gloss sheen
Water Resistance	Excellent, beads water
Mechanical Stability	Excellent
Light Stability	Fair
Solids	52%
Storage Stability	1 yr.
Odor	Epoxy
Application Temperature	50°F – 95°F (10°C - 32°C)
VOC content	175 g/L
Set to Touch	5 -8 hours.
Pot life	1 hour

CHEMICAL RESISTANCE

MEK (methyl ethyl ketone)	not recommended
Xylene	2 hours splash spill
Gasoline	2 hours splash spill
10% sodium hydroxide	8 hours splash spill
50% sodium hydroxide	2 hours splash spill
Acetic acid 5%	2 hours splash spill
10% sulfuric acid	2 hours splash spill
10% hydrochloric acid	2 hours splash spill
20% nitric acid	not recommended
Ethylene glycol	8 hours splash spill

SAFETY DATA SHEETS

The following are links to all available safety data sheets related to this product:

- [sealers-dura-kote-epoxy-water-based-b-sds.pdf](#)
- [sealers-dura-kote-epoxy-water-based-clear-tint-base-a-sds.pdf](#)
- [sealers-dura-kote-epoxy-water-based-white-tint-base-a-sds.pdf](#)