

# DURA-KOTE

## DK 600WB



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

# DK 600WB

## Water Based Epoxy - Clear

### DESCRIPTION

**DK 600WB™** is a 2 component 85% solids, water based epoxy floor coating for interior concrete and cement based overlays. The high performance clear top coat, provides the durability of a solvent base system with the ease and safety of a 0 VOC water base system that is both user-friendly and extremely durable. As a vertical wall coating, it enhances anti-graffiti properties.

Unlike nearly all epoxies, **DK 600WB** has remarkable properties related to moisture:

- Withstands high vapor transmission rate, up to 13 pounds per 1,000 ft<sup>2</sup> (5.4 kg per 100m<sup>2</sup>) 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.

**DK 600WB** is ideally suited for both commercial and residential settings: 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 Epoxy WB** are aligned with other coating systems placed on concrete or cement based overlays, 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 or cement based overlay. If the surface is delaminating, or divots are present, 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 **DK 600WB**. **Flash Patch** or **Deep Patch** is an excellent choice as a patching product to complement the system. Refer to their respective spec. sheets.

As a thin mil coating, **DK 600WB**, will never bridge construction joints in concrete. Large expansive slabs should have planned appropriate flexible caulks to allow for movement.

Cracks in concrete may likewise require treatment: evaluate crack as static or structural to set expectation of treatment. Refer to spec. sheet on **SCT-22 Crack and Spall Treatment**.

**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



### PACKAGING

- 2 gal. (15.1 L) kit
- 1 gal. (7.6 L) part A
- 1 gal. (7.6 L) part B

### MIXING RATIO

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

### COVERAGE

Varies due to porosity of substrate

As 1st coat approximately 125 - 175 ft<sup>2</sup> per gal. (11.6 -16.3 m<sup>2</sup> per 3.8 L) 9 – 13 mils wet; 7.6 - 11 mils cured

For smooth surface or second coat approximately 200 -250 ft<sup>2</sup> per gal. (18.6 - 23.2 m<sup>2</sup> per 3.8 L) 6.4 - 8 mils wet; 5.4 - 6.8 mils cured

### SHELF LIFE

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

Guide line no. 03732 for Concrete Surface Profile (CSP). The established profile is categorized as CSP-1 through CSP-3. Customarily cement-based overlays do not require profiling.

**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 denatured alcohol or acetone. Listed below are some common systems requiring a Finish or Top Coat

- [DK Flakes](#)
- [DK Metallics](#)
- [ColorTec 500 \(100% Solids Epoxy\)](#)
- [ColorTec 600WB \(Water Based Epoxy\)](#)
- Any other **Dura-Kote (DK) specialty system**

**5. Understand Moisture:** While **DK 600WB** (water based epoxy clear) 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 ft<sup>2</sup> (5.4 kg per 100m<sup>2</sup>) 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 ft<sup>2</sup> (m<sup>2</sup>) per 24 hours. Measurements that are in excess of 13 pounds per 1,000 ft<sup>2</sup> (5.4 kg per 100 m<sup>2</sup>) over 24 hours are too wet for application. Follow directions 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.

## TEMPERATURE/CURE

Avoid application on extremely cold or hot days or during wet, foggy weather. Basic rules include:

- Apply with 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 following application.
- Surface temperature must be a minimum 5°F (3°C) above dew point.

### Cure Rates @ 77°F (25°C)

Dry to touch = 6 - 8 hrs.  
Light traffic = 16 hrs.  
Heavy Traffic = 24 hrs.  
Full cure = 7 days

### Cure Rates @ 50°F (10°C)

Dry to touch = 18+ hrs.  
Light traffic = 30 hrs.  
Heavy Traffic = 3 days  
Full cure = 14 days

## APPLICATION

### Planning

1. Select appropriate PPE (personal protection equipment). Use of a NIOSH approved respirator is recommended. 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.

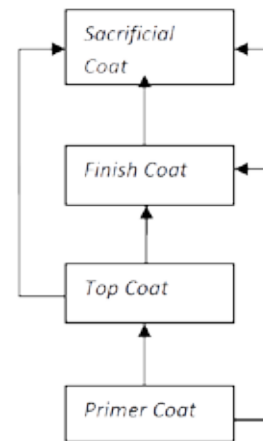
**Mask** all areas requiring protection; product will stick to just about everything.

### 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 within 30 minutes. If left in the pail too long, product will cure at an accelerated rate rendering it useless.
2. Pour 1 part B into 1 part 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.
3. Mechanically mix both parts A and B with "Jiffy" style mixer blade for 3 minutes at medium speed.
4. 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.
5. 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.
6. 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 DK Flakes and DK 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 applicator
  - a. Most commonly a roller ranging in nap size from mohair to 3/8" (9.5 mm) is 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.
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 First 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 selected, or applicator and client choice. Or a single coat of Dura-Kote 600WB may proceed to a Finish Coat of another Dura-Kote (DK) 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 for 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 xylene, 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:

- **DK 400 - Polyurethane SB (gloss)** – high gloss
- **DK 400WB - Polyurethane WB (gloss)** – low VOC
- **DK 400WB - Polyurethane WB (satin)** – Low VOC

- **DK 120 - Polyaspartic** – quick dry
- **DK 180 - Thick Build Polyaspartic** – quick dry

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 48 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 600WB** 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.

## 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.

## LIMITATIONS

- For use by trained professionals that have read the complete SDS.
- When masking use caution while taping to a floor that is not completely cured, especially at edges, as delamination may occur.
- Protect from metal wheel traffic and some furniture where point of contact may be damaging.
- Chemicals used in tire manufacturing may be detrimental to all sealers from vehicular parking.

## 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	85%
Storage Stability	1 year
Odor	Epoxy
Application Temperature	50°F – 95°F (10°C - 32°C)
VOC content	0 g/L
Set to touch	5 – 8 hours
Pot life	30 minutes

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