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**DK
500**

100% SOLIDS EPOXY

DESCRIPTION

DK 500™ - 100% Solids Epoxy Clear Coat is a 2 component 100% solids, zero VOC floor coating system that is used in a wide variety of applications such as, thick-build clear coat for a host of decorative concrete systems, Dura-Kote Flake, Dura-Kote Metallic systems, and in certain applications as a primer coat and/or binder coat. **DK 500 - 100% Solids Epoxy Clear Coat** is ideally suited for any commercial or residential setting: manufacturing facilities, warehouses, bars, clubs, retail stores, automotive showrooms, garage floors, gyms, locker rooms, stadiums, or anywhere that an exceedingly resilient floor is desired.

SureCrete provides the applicator with three Part "B" hardener formulations to create the ideal epoxy floor coating for each project. Regardless of choice of Part "B", the Part "A" of the **DK 500** does not change.

Economy Part "B" is an aliphatic amine hardener that delivers a cost effective clear coat. Aliphatic amines are susceptible to blushing and yellowing over time. SureCrete highly recommends the use of a polyurethane or polyaspartic top coat to extend the duration of time before the blushing and yellowing occur.

Premium Part "B" is a cycloaliphatic amine hardener that delivers a premium epoxy coating. Cycloaliphatic amines are preferred due to their increased resistance to: impact, chemicals, water/moisture, and high temperatures. In addition, the cycloaliphatic amine hardener aids in lowering blushing, water spotting, and yellowing. SureCrete's Premium Part "B" is generally used in thick build and metallic flooring systems.

Premium Thin-Viscosity Part "B" is a thin-viscosity cycloaliphatic amine hardener that delivers the same high performance features found in the Premium Part "B" hardener. The main difference being, when you add pigment's or powders to the mix; such as "SureCrete's Dura-Kote Metallic system, then manipulate and move the powders around, using the Thin Viscosity Part "B" you will achieve a more workable/flow able, 100% solids epoxy mix.

SURFACE PREP

The principles for surface preparation for **DK 500** are aligned with other coloring agents for cement-based products; the substrate must be:

1. **Clean:** The surface must be free of dust, dirt, oil, grease, paints, glues, sealers, curing agents, stamp tool releases, efflorescence, chemical contaminants, rust, algae, mildew and other foreign matter that may prevent proper adhesion.

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

3. **Sound:** No epoxy 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 **DK 500**. Flash Patch or Deep Patch is an excellent choice as a patching product to complement the system. Refer to their respective TDS. Evaluate all cracks and determine if they are static or structural to set expectation of treatment. Refer to SCT-22 TDS. Construction Joints in concrete

QUICK FACTS

PACKAGING

3 gal. (11.4 liter) kit

1 - 3 gal. (11.4 liter) short filled pail containing 2 gal. (7.6 liter) part A
1 gal. (3.8 liter) part B

OR

15 gal. (56.8 liter) kit

2 - 5 gal. (18.9 liter) pails part A
1 - 5 gal. (18.9 liter) pail part B

MIXING RATIO

2:1 / 2 part A to 1 part B

COVERAGE

Varies widely per system selected

Clear Coat: 100 -150 ft² per gal. (9.3 -13.9 m² per 3.8 liter) 10.7-16 mils

Thick Build: 40 - 70 ft² per gal. (3.7 - 6.5 m² per 3.8 liter) 23-40 mils

Metallic: 65 - 90 ft² per gal. (6 - 8.4 m² per 3.8 liter) 25-11 mils

may have sufficient movement to "telegraph" through the **DK 500**. Large expansive slabs should have planned appropriate flexible caulks to allow for this movement and prevent bridging of **DK 500** across either side of the construction joint.

4. Profiled:

- **Concrete:** For a proper bond, the surface of concrete must be opened up or roughed up to feel like 80 - 180 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.
- **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.

5. **Limit Moisture:** Since **DK 500** is not vapor permeable and due to the uncertainty of vapor barriers placed beneath concrete, testing prior to application is appropriate.

- 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.
- 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.

MIXING & APPLICATION

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.
- Relative humidity should be below 75%.

Cure Rates @ 77°F (25°C)

Dry to touch = 6 - 8 hr.
Light traffic = 16 hr.
Heavy traffic = 24 hr.
Full cure = 5 - 7 days

Cure Rates @ 50°F (10°C)

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

MIXING & APPLICATION

Planning

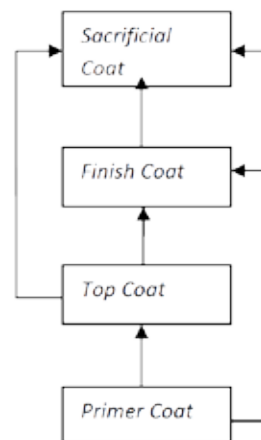
1. Select appropriate PPE (personal protection equipment). Provide adequate ventilation. Refer to SDS.
2. Work across the narrowest dimension of an area where practical.
3. Work to an exit from wet product.
4. To track coverage rate for each 3 gal. (11.4 liter) kit, after establishing room dimensions, before mixing commences, place a short piece of masking tape on the wall to correspond to the "distance" one kit should cover. Product should cover as a clear coat: approximately 100 - 150 ft² per gal. (9.3 - 13.9 m² per 3.8 liter) 10.7 - 16 mils OR as a thick build: 40 - 70 ft² per gal. (3.7 - 6.5 m² per 3.8 liter) 23-40 mils.
5. 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 1 part B into 2 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.
3. Mechanically mix both parts A and B with "Jiffy" style mixer blade for 3 minutes at medium speed. Jiffy style mixer at medium speed will help prevent air entraining.
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.

Ladder Chart for application of Coats



Primer Coat

1. Spiked shoes are required throughout application.
2. Select spreader
 - 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.
 - For a tighter coat, a squeegee or a roller ranging in nap size from mohair to " (9.5 mm) may be appropriate.
 - Rollers should be premium quality with phenolic core.
 - "De-fuzz" roller by wrapping tightly with masking tape and removing tape.
 - 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 **DK 500 - 100% Solids Epoxy Clear Coat** may proceed to a Finish Coat of another Dura-Kote product as described later in this spec. sheet (see ladder chart above.)

Top Coat

1. Clean: The Primer Coat should be cured, dry to the touch, and no longer tacky (refer to cure rates listed above as a guide) and then be screened 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 Primer Coat as it was curing. Follow screening with vacuuming. Follow vacuuming with a micro-fiber wipe with a solvent such as xylene or acetone.
2. Repeat all steps of application listed above. Planning, masking, mixing and handling are identical in Top Coat.

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.

APPLICATION CONT.

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

The Top Coat should be screened with a 100 grit sanding disc 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 as the primer coat was curing. Follow screening with vacuuming. Following vacuuming with a micro-fiber wipe with a solvent such as xylene or acetone.

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 500 - 100% Solids Epoxy dries; spills and tools can be cleaned up with a solvent such as xylene or acetone

DISPOSAL

Contact your local government household hazardous waste coordinator for information on disposal of unused product.

LIMITATIONS

- For use by trained professionals that have read the complete SDS.
- Product is strictly for interior use, upon well drained concrete slab with appropriate vapor barrier, subject to no hydrostatic pressure.
- 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.

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. Inhalation: Avoid prolonged breathing of airborne dust, particularly present during mixing. Use NIOSH approved respirator for nuisance 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.

SAFETY DATA SHEETS

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

- [sealers-dura-kote-epoxy-100-a-sds.pdf](#)
- [sealers-dura-kote-epoxy-100-b-sds.pdf](#)

PRODUCT PART #'S

Part "A" (3-Gal Kit)	SKU# 35104019
E - Part "B" (3-Gal Kit)	SKU# 55104027
P - Part "B" (3-Gal Kit)	SKU# 55104028
PTV - Part "B" (3-Gal Kit)	SKU# 55104029
Part "A" (15-Gal Kit)	SKU# 35104020
E - Part "B" (15-Gal Kit)	SKU# 55104030
P - Part "B" (15-Gal Kit)	SKU# 55104031
PTV - Part "B" (15-Gal Kit)	SKU# 55104032

TEST DATA

TEST DATA

Appearance (cured)	Gloss sheen
Water Resistance	Excellent, beads water
Mechanical Stability	Excellent
Light Stability	Yellows
Adhesion	400 psi (2758 kPa) (concrete failure)
Abrasion resistance: Tabor/	1000gm. load @ 500cycles= 31mg loss
Compressive strength:	9000 psi (62053 kPa)
Solids	100%
Storage Stability	1 year
Appearance (wet)	Clear – Straw color
Odor	Epoxy
Application Temperature	50 – 90°F (10 - 32 C)
VOC content	0
Pot life	10 -20 minutes

CHEMICAL RESISTANCE

TEST DATA

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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