



Top Shelf Epoxy

Technical Data Sheet

Product Description

Kretus Top Shelf Epoxy is a two component, high performance cycloaliphatic concrete floor coating system. Its epoxy chemistry provides excellent bonding characteristics. It can be applied as a 12 to 50 mil coating system or a finish coat over Industrial Epoxy or other high build systems. Paint Chips or Silica Sand can be broadcast into Top Shelf Epoxy to create a custom look. Its design features provide for the highest industrial and commercial demands. Advantages:

- Essentially odorless
- Self-priming over properly prepared substrate
- VOC Compliant
- High color stability
- High gloss
- Withstands medium traffic as thin as 12 mil
- Chemically resistant
- No amine blush

Applications

The uniqueness and universality of its chemistry allows Top Shelf Epoxy to be used in the following applications:

- Pharmaceutical
- Food Preparation
- Garage floors
- Restrooms
- Kitchens
- Manufacturing
- Clean rooms
- Automotive showrooms
- Schools
- Laboratories

Colors

Top Shelf Epoxy is available with standard premixed colors or in tint base with pourable pigment color kits. The color kits provide the user with stock versatility. By broadcasting Paint Chips or Silica Sand, endless color and texture combinations can be created.

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|------------------|-------------------------|-----------------|
| Standard colors: | Other available colors: | |
| • Clear | • Black | • Safety Yellow |
| • Light Gray | • White | • Dark Blue |
| • Medium Gray | • Dark Gray | • Dark Green |
| • Sand Beige | • Light Beige | • Bright Green |
| • Mocha | • Dark Beige | • Brick Red |
| | • Safety Red | • Dark Brown |
| | • Safety Blue | • Blue Gray |

Other colors are available at an additional charge.

Safety

Consult Top Shelf Epoxy material safety data sheet. Avoid contact with skin. Some individuals may be allergic to epoxy resin. Protective gloves and clothing are recommended.

Packaging

	Part A	Part B
1.5 Gallon Kit	1 gal	½ gal
15 Gallon Kit	10 gal	5 gal
150 Gallon Kit	100 gal	50 gal

Physical Properties

PROPERTY	VALUE	REFERENCE
Compressive Strength	7,800 psi	ASTM C 579
Flexural Strength	3,700 psi	ASTM D 790
Tensile Strength	3,900 psi	ASTM D 638
Bond to Concrete	350 psi <i>Concrete fails at this point</i>	ASTM D 4541
Taber Abrasion	75-80 Mgs	ASTM D 4060
Flammability	Self-extinguishing	
Hardness, Shore D	84	ASTM D 2240
Flash Point	>200°F	

Product Data

Volumetric Ratio:	2 to 1
Solids:	100% (+ or - 1%)
Coverage:	100 SF/gal. at 16 mil
Application temperature:	65-90°F
Thinning:	Not required
Pot life:	10-15 minutes
Working time on floor:	20-30 minutes
Cure time:	12 hours (walking) 24 hours (traffic)
Critical recoat time:	12 hours
Shelf life:	12 months
USDA Food & Beverage:	Meets requirements

Concrete Preparation

Before coating is applied, concrete must be:

- Dry – No wet areas
- Clean – Contaminants removed
- Profiled – Surface etched
- Sound – All cracks and spalled areas repaired

Mechanical preparation is the preferred method of preparing concrete for coating application. Shot-blasting, diamond grinding, scarifying and scabbling are all acceptable methods.

Patching

Voids, cracks and imperfections will be seen in finished coating if the concrete is not patched correctly. Patch concrete with Easy Patch. After the patching material is cured, diamond grind patch. If another patching material is used, contact a Kretus technical representative for a compatible and approved alternative.

Testing

All surfaces are not the same. It is recommended that a sample area be done before the start of the project. The test should be done on-site, using the proposed method by the assigned applicator to insure proper adhesion and color. A sample area should also be done on any existing coatings to determine if any contaminants exist or if delaminating will occur.

Mixing

The ratio of Top Shelf Epoxy is 2 to 1. That is, two parts A (resin) to one part B (hardener). Generally, three mixed gallons is ideal for application. Mix the following with a drill and mixing paddle. **Note: If using a drill mixer, use a low speed (not to exceed 300 rpm) to prevent air entrapment.**

1. Premix the Part A for 30-45 seconds. Then, if using the 15 gallon kit, pour out 2 gallons into an empty 5 gallon bucket which then becomes the mixing bucket. (The 3 gallon kit allows the Part A bucket to be used as the mixing bucket, since the Part A comes in a 3.5 gallon bucket.)
2. Add 1 gallon of Part B and mix for another 60-90 seconds.
3. Top Shelf Epoxy is designed to be immediately poured on the floor. Leaving mixed product in the container will greatly reduce pot life. Once poured out on the floor, 20-30 minutes of working time can generally be expected.

Application Instructions

Application of Top Shelf Epoxy for a nominal 16 mil coating system is applied in two coats and in one pass as a top coat over 4000. For estimation purposes, use 100 SF per gallon in either case.

1. Always apply in descending temperatures. Concrete is porous and traps air. In ascending temperatures (generally mornings) the air expands and can cause out gassing in the coating. It is safer to apply coatings in the late afternoon, especially for exterior applications.
2. Optimum ambient temperature should be between 65-90°F during application.
3. Mix three gallons of resin using above mixing instructions.
4. Apply approximately 200 SF per gallon (100 SF per gallon for a top coat over Industrial Epoxy systems) by immediately pouring out on surface in a ribbon, while walking and pouring at the same time until bucket is empty.
5. Using a window squeegee on a pole, pull Top Shelf Epoxy over substrate. As a first coat over bare concrete, pull

resin as thin as possible while still wetting out concrete and uniformly covering surface. This allows trapped air to escape more easily. To apply in a single coat over an Industrial Epoxy system, pull at about 100 SF per gallon.

6. Using a 3/8" non-shedding phenolic (plastic) core paint roller, roll coating forwards and backwards.
7. Lastly, back roll in the opposite direction as step 6.
8. Apply second coat by repeating steps 1-7 the within 12 hours. Failure to recoat during this window may result in fish eyes. Always sand floor after 12 hours before recoat.

Chip/Silica Sand Broadcast Instructions

1. **Chip Broadcast:** Following Step 6 above. Broadcast Color Chips/Micro Chips (at 16 lbs. per 100 S/F) by tossing them into the air and allowing them to gently rain down into the wet resin.
2. For a random broadcast, use 1 lb. of chips per 100 S/F.
3. Allow to cure. Then scrape the basecoat with a drywall scraper in all directions. Vacuum small pieces and dust.
4. **Silica Sand Broadcast:** Following Step 6 above, gently throw the silica sand up into the air, allowing it to fall without lumping in one spot or moving the resin. Do this until the floor is totally saturated with the silica sand and the resin will not accept any more. This generally requires 1/2 to 3/4 lbs. per S/F. Allow to dry for 6-8 hours.
5. Sweep floor and stone any high spots.
6. **Following either method**, apply seal coat of Top Shelf Epoxy/Polyaspartic 85 Rapid Cure at approx. 100 S/F per gallon.

Clean-up

Top Shelf Epoxy, while in an un-reacted state, may be cleaned up with water and degreaser. Isopropyl alcohol or acetone may be needed once the resin begins hardening. Lastly, a strong solvent like methylene chloride may be required if resin is nearly set up.

Product Limitations

Ground level concrete slabs emit invisible moisture vapor. The allowable moisture emissions for concrete are 3 lbs / 1,000 SF over a 24 hour period. If moisture is above this level, then blistering and delamination of coating may occur. A calcium chloride test should be performed to determine concrete moisture level. If moisture levels exceed the 3 lb. limit, a concrete moisture vapor control system should be used first before applying coating system. Please contact the Kretus technical department for approved systems.

Coating systems are susceptible to cracking if the concrete moves or separates below the coating. Hence, joint and crack treatment should be reviewed prior to coating application. As a general rule, control joints (saw cuts) and random cracks should be saw cut or chased first then filled with Perfect Patch or similar approved hard epoxy product. Construction joints (two slabs which meet and hence move) should be treated. After the coating has been applied and cured, saw cut through the coating over construction joints and apply an elastomeric caulking.

Warranty

Kretus products are warranted for one year after date of application. Please refer to the Limited Material warranty for additional clarification.