

**DESCRIPTION:** Ultra Surface Epoxy 500 is a 100% solids, two component, epoxy formulation consisting of a high performance Bisphenol A epoxy resin blend combined with a Cycloaliphatic curing agent. With the latest in epoxy technology this product is formulated for priming, sealing and crack repair applications. It has attractive properties as low viscosity, no VOC's [solvent free], low odor, moisture insensitivity, and excellent bonding on a variety of surfaces. It is packaged in 1 ½, 3 gallon and 15 gallon kits for convenient use in a 2:1 mixing ratio [2 parts A to 1 part B]. It is a versatile, high grade epoxy material for a variety of job applications.

**TYPICAL USES:** Ultra Surface Epoxy 500 is designed as a crack repair material, an economical epoxy sealer for warehouse floors or a primer coat for broadcasting Color Quartz or other aggregates such as the Ultra Surface Tuff-Grit granules. It can also be used as a primer on a step or curb edge prior to patching with the Ultra Surface Polymer Concrete patching mix. For this application the polymer concrete patching mix should be applied over the Epoxy 500 epoxy within 15-30 minutes while it is still tacky.

**APPLICATION CONDITIONS:** Apply to a properly prepared substrate, in good weather conditions.

**APPLICATION TEMPERATURE:** Can be applied above 35 degrees fahrenheit. For best results, apply above 45 degrees fahrenheit. [Cures faster in warmer temperatures].

**SURFACE PREPARATION:** The surface to be sealed or coated should be thoroughly clean; free of any contaminants such as oil, grease or incompatible coating materials. Shotblasting or power scrubbing with detergent, acid washing, neutralizing and pressure washing are common surface preparation methods. It is recommended to apply Epoxy 500 over a dry surface.

**MIXING INSTRUCTIONS:** The mixing ratio for Epoxy 500 is 2 parts A to 1 part B. Mix thoroughly for 3-5 minutes using a drill motor and mixing paddle or for small quantities a stir stick can be used. Scrape the sides and bottom of the container while mixing. Mix up no more material than can be used in a 15 minute time period.

For crack repair and minor patching of holes, silica sand (#30-60) can be added to Epoxy 500 to make a patching mix. After mixing part A and B together add the silica sand to achieve the consistency desired. Generally 1 part Epoxy 500 to 1 to 2 parts sand.

**CURING:** Epoxy 500 is generally tack free in about 5 hours at approximately 70 degrees Fahrenheit; cooler temperatures result in longer drying times; while in warmer temperatures the drying time is accelerated.

## Ultra Surface Epoxy 500

### Advantages as an epoxy material:

1. 100% Solids, Zero VOC
2. Low Viscosity.
3. Fast Setting.
4. Excellent Adhesion. Bonds well to concrete and other substrates.
5. Adheres to damp concrete.
6. Wide variety of uses; crack repair material, economical sealer, prime coat for Ultra Surface Polymer Concrete.
7. Self Leveling
8. Resistant to Amine Blush, Resistant to Exudation.
9. Will not crystallize, even in cold environments.
10. Insensitive to moisture.
11. Not regulated by the DOT.

## **APPLICATION INSTRUCTIONS:**

**As a crack repair material with and without sand:** Use Epoxy 500 without sand to fill fine cracks or to coat the crack edges prior to the repair. For cracks which are wider than 1/16th of an inch, prime the clean, sound edges of the cracks with Epoxy 500 using a paintbrush or catsup bottle. Next, immediately fill the cracks with a mixture of Epoxy 500 epoxy and #60 silica sand using a stiff 5" wide putty knife. Mix 1 part Epoxy 500 epoxy with 1 to 2 parts sand using a stir stick to achieve the consistency desired. Press the Epoxy 500 sand mix into the cracks using a stiff putty knife to fill the cracks as deep as possible. Scrape the excess material off the surface and allow to dry.

**Crack repair prior to an Ultra Surface Color Flake Application:** Once the cracks have been filled smooth with the surrounding surface, proceed with the Color Flake application. For this application Epoxy 500 and sand is all that is needed in the cracks. See Color Flake instruction Booklet for step by step instructions with pictures.

**Crack repair prior to an Ultra Surface Polymer Concrete Application:** Once the cracks have been filled with the Epoxy 500 sand mix and scraped smooth with the surrounding surface, the next step is to cover the crack repairs with Elastomeric Basecoat and crack repair reinforcement fabric. Brush the Elastomeric Basecoat over the Epoxy 500 approximately five inches wide a few feet at a time. Immediately lay the 4" reinforcement fabric into the wet Elastomeric Basecoat and brush another thin coat of Elastomeric Basecoat over the fabric. Continue this process until all the cracks have been repaired. When dry to touch apply the desired Ultra Surface Polymer Concrete Application. See the Crack Repair Instruction Booklet for step by step instructions with pictures.

**As a Sealer or Basecoat for Color Quartz or Tuff-Grit Granules:** Epoxy 500 makes an excellent sealer over warehouse floors etc. to provide a durable, chemical resistant finish. Because of its self leveling properties it provides a high build, smooth, glossy finish with excellent resistance to heavy foot traffic and fork lift traffic. Apply by 1/4-3/8" nap roller to the thickness desired. It can also be spread by a regular or notched squeegee and then immediately back rolled to provide an even finish. If desired aggregate such as Color Quartz or Tuff-Grit granules (available through Concrete Solutions) can be broadcast into the Epoxy 500 to provide a more durable, slip resistant finish. Broadcast the granules to achieve a light, medium or heavy saturation. When dry, remove any loose granules and apply a topcoat seal of Ultra Epoxy 600 and/or HP or SB Urethane.

**As a Basecoat for Ultra Surface Polymer Concrete:** Epoxy 500 can be used as a basecoat before applying an Ultra Surface Polymer Concrete patching mix to provide extra bond strength when needed. Recommended when patching the vertical corners and edges of curbs, steps, joints, etc. First, brush a thin coat of Epoxy 500 without sand over the area to be repaired. Within 30 minutes while the Epoxy 500 is still wet or tacky patch over it with the polymer concrete patching mix. The polymer concrete and Epoxy 500 will cure together and achieve a superior bond to the substrate. Do not apply polymer concrete over dry Epoxy 500.

**POT LIFE AND WORKING TIME:** At 70 degrees F., approximately 15 minutes [less in warmer temperatures].

**METHODS OF APPLICATION:** Putty Knife, Trowel, Brush, Roller [1/4-3/8 nap] or Notched Squeegee.

**COVERAGE RATE:** As a crack repair material for cracks 1/8 x 1/4" = approximately 400 ln. ft. per gallon.  
As a sealer or prime coat - Approximately 75 - 150 sq. ft. per gallon.

**DRYING TIME:** Generally tack free in approximately 5 hours at 70 degrees F.

**RECOAT TIME:** Generally after 6 hours and within 24 hours of the previous application to achieve a chemical bond. When applying additional coats after 24 hours of curing time it will be necessary to sand the Epoxy 500 with a 80-100 grit sandpaper using a floor polisher machine to slightly scratch, dull and abraid the surface. This will ensure a proper physical bond between coats.

**RETURN TO TRAFFIC:** 12-24 hours.

**SOLIDS BY VOLUME:** 100%

**WEIGHT PER GALLON:** 9 pounds

**FLASH POINT:** Resin = 400 F., Hardener = 210 F.

### **CURED PROPERTIES:**

Shore D Hardness: 82

Compressive Strength: 10,000 psi min.

Flexural Strength: 11,900 psi

Tensile Strength: 7,500 psi

Elongation: 4%

Bond Strength 300 psi min. [to concrete]

**SHELF LIFE:** Minimum of one year in unopened containers.

**Chemical Resistance:** Excellent resistance to the following reagents: Xylene, 1,1,1, 5% Detergent Solution, 50% Sodium Hydroxide, 70% Sulfuric Acid, 10% Hydrochloric Acid, Skydrol, Synthetic Gasohol, Mogas, Diesel [No. 2 and 3] oils, JP-4, 5,7,8, Diethylene Glycol, Monomethyl Ether; Good resistance to Toluene, MEK, EB, 10% Acetic Acid, Ethyl Alcohol, Methyl Alcohol. When chemical resistance is a factor, it is recommended to do a test to determine suitability.

## **WARRANTY AND LIABILITY:**

The applicator is responsible to make his or her own assessment of the products suitability for a particular purpose. Our liability is limited to the purchase price of any product proven to be defective. No other warranties are made concerning the product, whether expressed or implied, or statutory, such as warranties of merchantability or fitness for a particular purpose. In no way is Concrete Solutions or its agents liable for any consequential or incidental damages. It is the responsibility of each buyer or applicator to determine that the product or application is suitable for his or her particular purpose.

