

# ENGRAVE - A - CRETE

## CONCRETE RESURRECTION

### Technical Data Sheet (TDS) CR-545 INSIDE MATTE URETHANE

\*\*This product may only be used on fully cured concrete. Allow a minimum of 28-45 days of cure time after the concrete is poured to allow ample time for the concrete to completely hydrate.

#### Product

Concrete Resurrection CR-545 Inside Matte Urethane is a high solids, matte finish, two component, water-based aliphatic polyurethane. It provides performance properties equal to conventional solvent based urethanes without the associated health and environmental problems. Inside Matte Urethane is a hard, fast curing coating with a matte finish, superior abrasion resistance, hot tire resistance, chemical resistance, low VOC, low odor and is easy to clean. Resistance to yellowing from U.V. light is excellent. Typical areas of application would include clean rooms, hospitals, concrete counter tops, commercial, retail, and high traffic areas. Inside Matte Urethane is also suitable for aircraft hangars, automotive repair facilities and garage floors. Excellent for both wall and floor coatings.

**Prior to installing Concrete Resurrection CR-545 Inside Matte Urethane, a primer coat of Concrete Resurrection CR-530 Inside Epoxy must be applied.**

#### Coverage

Coverage rate is 200 - 300 sq ft per gallon. Coverage variations depend on concrete surface porosity, texture and amount of material applied.

#### Surface Preparation

Prior to installing Concrete Resurrection CR-545 Inside Matte Urethane, a primer coat of Concrete Resurrection CR-530 Inside Epoxy must be applied. Allow a minimum of 16 hours for Concrete Resurrection CR-530 Inside Epoxy to cure, then mechanically clean and abrade using a floor machine (buffer) with 80 mesh sanding screen prior to application.

#### Application Tools

Roller or Brush

#### Mixing Instructions

Pour a full pre-packaged kit of 2 parts of Part A to 1 Part of Part B together and mix well with slow speed mixing equipment such as a squirrel cage mixer for 2 minutes to completely mix the components. Be careful to not whip air into the mixture, and be certain to scrape the sides and bottom of the can to combine all molecules. Incomplete mixing or an off balance mixture will result in a coating that will remain soft forever.

#### Application Recommendations

Apply the mixed material by brush or roller to a primed surface with a 3/8" nap-3/4" nap shedless roller cover at a rate of 4-6 wet mils within the usable pot life time frame, as well as the recommended temperature and relative humidity guidelines listed. If continuous outgassing in the concrete is causing bubbles, re-roll the material using a cross rolling method before the material cures to reduce or eliminate air entrapment. If the material becomes thick while applying and sticking to the roller, stop applying and discard the mixed material. At this point it has reached the end of the usable pot life. While applying, keep a wet edge to prevent roller marks. It is recommended to work in sections usually using control joints or cut lines as dividers to ensure proper application results. **Do not allow to Puddle!** Remove any excess material in joints or low impressed areas. Puddled areas may not cure adequately and may cause blush or a white haze. If recoating after 24-36 hours (depending on temperature) a light sanding using a fine sanding screen must be done.

**Please Note:** Applying Inside Matter Urethane outside of the suggested parameters may result in job failure. It is always recommended to test the product in a small, inconspicuous area (on the same concrete substrate) for desired results prior to application.

**Cure Rate/ Drying Time**

- Dry to Touch.....6 hours
- Re-Coat.....12 hours
- Light Traffic.....18 hours
- Full Cure.....7 days
- Pot Life at 72 degrees (F)..... 30-45 min

Application temperature.....55-90 degrees F with relative humidity below 75%  
Higher temperatures and lower humidity will accelerate cure times.  
Lower temperatures and higher humidity will lengthen cure times.

**Thinning**

Do not thin.

**Additional coats**

Previously coated surfaces must be mechanically cleaned and abraded using a floor machine (buffer) with 100 mesh sanding screen prior to application.

**Clean Up**

Discard used consumable items such as roller pans, roller covers, brushes, etc.

**Storage and Shelf Life**

Do not allow to freeze. Shelf life of unopened product is approximately one year.

**Physical Properties**

- Mixing Ratio, by Volume ..... 2-1
  - Density lbs/Ga ((Federal Spec. TTP-141B)..... 9.06
  - Solids Content, by Weight (Clear) (Federal Spec. TTP-141B) ..... 56%
  - Coverage (3-4 mils. Dft).....200-300 sq ft/ga
  - VOC, grams/liter ..... 100
  - Pot Life (72 degrees) ..... 30-45 mins
- Pot Life is reduced by increasing temperature and/or mass.

**Dry Times (72 degrees, 50% R.H.)**

- Dry to Touch..... 5-6 hours
- Recoat..... 12 hours
- Light Traffic ..... 18 hours
- Full Cure.....7 days

Higher temperatures and lower humidity will accelerate cure times.  
Lower temperatures and higher humidity will lengthen cure time.

**Performance Properties**

- Gloss (clear material).....Matte Finish
- Pendulum hardness, sec (ASTM D-4336) ..... 175
- Tabor Abrasion - 1000 gm. load 1000 cycles, CS 17 wheel..... 38-40 mg. loss
- Flexibility (1/8 Mandrel) .....Pass
- Water Resistance.....Excellent

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## CONCRETE RESURRECTION

### **Chemical And Stain Resistance (ASTM D-1308 24 Hour Immersion)**

Urine .....	no effect
Blood .....	no effect
Brake Fluid .....	no effect
Gasoline .....	no effect
Skydrol B-4.....	no effect
Xylene .....	no effect
MEK.....	Film Softened
Ethylene Glycol.....	no effect
10% Sodium Hydroxide.....	no effect
50% Sodium Hydroxide .....	no effect
10% Hydrochloric Acid.....	no effect
25% Sulfuric Acid.....	no effect
25% Acetic Acid .....	no effect

\*\*A chemical exposure test should always be performed prior to application to ensure satisfactory resistance.

### **Limitations**

- All new concrete must be cured for at least 28 days prior to application.
- Coverage rates depend upon many conditions including application method, surface porosity, applicator, etc.
- CR-545 Inside Matte Urethane should be applied in thin coats. Do Not Puddle.
- Be aware that this product may be slippery when wet. Anti Slip additives can be used to reduce surface slip hazards.
- CR-545 Inside Matte Urethane may darken the surface of many new and existing concrete substrates. Test prior to use.
- Physical properties listed on this technical data sheet are typical values not specifications.
- Previously coated surfaces must be mechanically cleaned and abraded using a floor machine (buffer) with 80 mesh sanding screen prior to application.
- Do not apply material if the humidity is over 90% and ventilation is poor. Improper cure will result.
- Air and substrate temperatures must be minimum 55°F
- Do not apply when air or surface temperature exceeds 90 degrees (F) or LAP marking / poor penetration / bubbling may result.
- Do not apply to bare, wet, or damp concrete, moisture will inhibit penetration of the sealer and cause improper curing, flaking or lifting of the sealer.
- Do not apply if dew may condense on the surface before the sealer has cured.
- Allow for extended dry times during cold weather / high humidity.

### **Moisture Vapor Emissions/Alkalinity Precautions**

All interior concrete floors not poured over an effective moisture vapor barrier/inhibitor are subject to possible moisture vapor transmission and related high levels of alkalinity that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride and relative humidity probe testing to determine if excessive levels of vapor emissions or alkalinity are present before applying any coatings.

### **Safety**

Do not breathe vapors. When using in confined or limited ventilation areas, use appropriate respirator to protect against breathing vapors. Avoid contact with skin; wear protective gloves and clothing. Always use eye protection such as goggles, face shield or safety glasses. Read Material Safety Data Sheet before using.

**First Aid**

Eye Contact: Immediately flush eyes with plenty of water for at least 15 min. while holding eyelids open. Seek medical attention.

Skin Contact: Immediately remove contaminated clothing. Wipe excess from skin and wash with soap and water. Seek medical attention if irritation persists.

Inhalation: Remove person to fresh air and provide oxygen if breathing is difficult. Seek medical attention.

**Slip and Fall Precautions**

OSHA and the American Disabilities Act (ADA) have standards for slip-resistance on pedestrian surfaces. The coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. We recommend the use of slip-resistant additives in all sealers or coatings that may be exposed to wet, oily or greasy conditions. It is the installer and end users' responsibility to provide a flooring system that meets current safety standards.

Engrave-A-Crete, Inc. or its sales agents will not be responsible for injury incurred in a slip and fall accident.

Warranty– This warranty is made in lieu of all other warranties, either expressed or implied. Before application the User shall determine the suitability of the product for his/her intended use and User assumes all risks and liabilities whatsoever in connection therewith. Neither seller nor manufacturer has any knowledge or control concerning the purchaser's use of this product and no warranty is made as to the results of any use. The Manufacturer and/or Seller warrants that if any goods supplied prove defective in material the sole obligation shall be to replace said product. Any claim of defective product must be received in writing within one (1) year from date of shipment. Neither Manufacturer nor Seller shall assume any liability for injury, loss, or damage resulting from use of this product.

Ordering – Contact Engrave-A-Crete at 1-800-884-2114

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