

ENGRAVE - A - CRETE

CONCRETE RESURRECTION

Technical Data Sheet (TDS) CR-546 High Gloss WB 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-546 High Gloss WB Urethane is a high gloss, two component water based aliphatic polyurethane with excellent color enhancement properties. CR-546 High Gloss WB Urethane has excellent adhesion and hardness properties as well as abrasion, hot tire, and chemical resistance. CR-546 High Gloss WB Urethane is low VOC and low odor with multiple uses (Garages, shops, showrooms and offices as well as many other interior applications).

Coverage

Coverage rate is: First Coat: 200 - 300 sq ft per gallon. Second Coat: 250 – 350 sq ft per gallon

Coverage variations depend on concrete surface porosity, texture and amount of material applied. Excessive build up should be avoided.

Surface Preparation

For a thin film build system (2-3 mils) we suggest either mechanical scarification, acid etching (and the neutralize to 7 PH), or diamond grinding until an appropriate profile is accomplished. To ensure adequate adhesion, the substrate must be free of all dirt, oil, dust, and foreign contaminants and applied within the recommended recoat time of the primer if one was used. Prior to application of the primer a test should be made to determine that the concrete has an acceptable vapor barrier. This can be done by placing a 4' x 4' plastic sheet on the substrate and completely taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate does not show signs of eventual hydrostatic pressure problems that may later cause loss of adhesion. Adhesion tests are recommended prior to using.

Substate and air temperature must be no less than 40 deg. F and not exceed 80 deg F. If applied outside these limits the sealer may not achieve adequate film formation and may have excessive air entrapment, bubbles, blushing or hazing. Note that in direct sunlight, substrate temperature can exceed 150 deg F which can cause extreme bubbling issues.

Application Tools

Apply the mixed material by brush or roller to a prepper surface with a 3/8" 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 in the Technical Information section. 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 keep a wet edge to prevent roller marks. It is recommended to work in sections usually using control joints as dividers to ensure proper application results. Do not allow to Puddle! Remove any excess material in joint or low impressioned areas. Puddled areas may not cure adequately and may cause blush or a white haze. If recoating after 18 hours (temperature depending) a light sanding using a fine sanding screen may be needed to ensure adequate inner coat adhesion.

PLEASE NOTE: Applying material outside the suggested parameters may result in product 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. Coverage rates may vary for all coatings and substrates depending on porosity, density, texture etc. When applying, do not exceed 400 sq ft per gallon. Applying too thin of a coating may cause inadequate film formation or performance expectations may be limited. **DO NOT USE ON BRICK.**

Mixing Instructions

If mixing less than a full kit, mix Part A only separately by vigorously shaking container AND mix with a drill mixer for 2-3 minutes prior to blending the smaller kit to ensure uniform distribution of all ingredients (drill mixer must be used, not a stir stick). Failure to do so may result in craters/fish eyes. Pour a full pre-packaged kit of 4 parts of Part A to 1 part of Part B together and mix well with slow speed mixing equipment such as a jiffy mixer for 2-3 minutes or until the material is thoroughly mixed and homogenous. Water based two part systems need to be mixed well for adequate cure and a streak free finish.

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.....5-6 hours

Re-Coat.....6-12 hours

Light Traffic.....16-20 hours

Full Cure.....4-7 days

Pot Life at 72 degrees (F)..... 30-45 min

Application temperature.....50-80 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 4-1

Solids/Active Content, Percentage by weight 40%

Coverage (2-3 mils. Dft).....200-300 sq ft/ga

Appearance – Wet.....Milky White

Appearance – Dry.....Clear and Gloss Finish

VOC, grams/liter.....Less than 125 grams/Liter

Pot Life (72 degrees)30-45 mins

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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 60 deg	88
Pendulum hardness, sec (ASTM D-4336).....	175
Abrasion Resistance (ASTM 4060-81).....	38-40 mg. loss
Flexibility (1/8 Mandrel)	Pass
Water Resistance.....	Excellent

Chemical And Stain Resistance

Urine.....	Recommended (little to no visible damage)
Xylene	Recommended (little to no visible damage)
MEK	Conditional (Wash within one hour of exposure to avoid effects)
Isopropyl Alcohol	Recommended (little to no visible damage)
Methanol	Recommended (little to no visible damage)
Gasoline	Recommended (little to no visible damage)
Diesel Fuel	Recommended (little to no visible damage)
Skydrol	Recommended (little to no visible damage)
Motor Oil.....	Recommended (little to no visible damage)
Transmission Fluid	Recommended (little to no visible damage)
Brake Fluid	Recommended (little to no visible damage)
Hydraulic Fluid.....	Recommended (little to no visible damage)
Water.....	Recommended (little to no visible damage)
Sugar/Water	Recommended (little to no visible damage)
Chlorinated Water.....	Recommended (little to no visible damage)
Clorox (10%) Water	Recommended (little to no visible damage)
Vinegar/Water 5%	Recommended (little to no visible damage)
Wine	Recommended (little to no visible damage)
Sodium Hydroxide 25%	Recommended (little to no visible damage)
Muratic Acid 10%.....	Recommended (little to no visible damage)
Sulfuric Acid 10%	Recommended (little to no visible damage)
Nitric Acid 10%	Not Recommended (visible damage will occur)
Phosphoric Acid 10%	Recommended (little to no visible damage)
Hydrochloric Acid 20%.....	Recommended (little to no visible damage)

Allow 7-14 days for product to fully cure to reach full abrasion and chemical resistance properties.

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-546 High Gloss WB 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-546 High Gloss WB 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.
- This product will freeze during storage. Store at temperatures above 40 deg F.
- All HVAC ventilation ducts should be somehow blocked prior to application so solvent fumes are not distributed.
- If using indoor, use proper ventilation while applying and for hours after application to ensure fumes are removed.
- It is not recommended to apply product over carpet, tile, or other types of floor adhesives.

CLEAN-UP: Use MEK or acetone. Dispose of containers in accordance with local, state and federal regulations.

PRODUCT REMOVAL: Dried, cured sealer may be removed with a commercial stripper or by using a diamond grinding method, sandblasting method or similar mechanical action.

SHELF LIFE: Up to one year from manufacture date in its original, unopened container stored at room temperature.

PACKAGING: Available in 2.5 gallon kits.

Always read all technical information, label and SDS prior to use.

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

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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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