

RTE-100 LV

100% Solids, Ultra-Low Viscosity High-Performance Epoxy Providing a Superior UV Resistance

DESCRIPTION

The RTE-100 LV UV is a 100% solids, two-component (2A:1B), low-VOC, and ultra-low viscosity specialty epoxy designed for concrete floor coating, specifically engineered to provide optimal flow. This product possesses mechanical properties best suited for aesthetic clear or metallic residential and commercial applications. It offers one of the longest pot life and working times in the industry. The RTE-100 LV UV has been designed as a topcoat/body coat for metallic epoxy and clear flooring systems that require superior flow. The RTE-100 LV UV formulation is based on high-performance cycloaliphatic polyamine technology, displaying outstanding properties and delivering a superior aesthetic finish.

TYPICAL USES

Uses The RTE-100 LV UV provides excellent results for the following applications:

- Aesthetic metallic or clear systems for residential and commercial uses
- Office buildings
- Retail stores
- Public facilities including hospitals and schools
- Pharmaceutical companies

BENEFITS

- One of the best UV resistances in this product category
- Ultra-low viscosity provides great flow for metallic applications
- Easy application with one of the longest pot life and working time of the industry (90-100 min)
- Environment friendly (100% solids, no solvent, and low-VOC)
- Virtually odor-free
- Potential for LEED eligibility
- Superior mechanical and chemical properties
- Good elongation and excellent abrasion resistance
- High resistance to amine blush and contamination (fisheyes)
- Excellent defoaming even at thicker levels
- Superior mechanical and chemical properties
- Impermeability / low moisture sensitivity
- High density of the product prevents dirt penetration resulting in low maintenance post application

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Application Data

Mix Ratio	2A:1B	
Packaging	3 US gallon kit (3 x 3.78 L)	
Color	Clear	
Solids Coverage / US GAL	Mils	Sq. Ft.
	8	200
	10	160
	12	133
	30	54
	40	40
	50	32
Shelf Life	One year, in original unopened factory pails under normal storage conditions	
Pot Life	80 min	
Application temperature	Min 16°C / 61°F, Max 30°C / 86°F	
Cure Time	22°C / 72°F and 50% Rel. Hum.	
Working time	90 - 100 min	
Tack Free	14 h	
Recoat	14 - 24 h	
Dry Through	24 h	
Foot Traffic	36 h	
Light Traffic	48 h	
Full Cure	1 week	

Technical Properties

Hardness ASTM D2240	82	Shore D at maturity
Abrasion Resistance ASTM D4060 (Taber Abraser, Wheel CS 17/1000 g (2.2 lbs) / 1000 cycles)	50 mg loss	
DRY Coefficient of Friction (Smooth coating) ASTM D1894	1.2	
Pull Off Test ASTM D4541	>3 Mpa	
Elongation at break ASTM D638	18%	
Tensile Strength ASTM D638	6950 psi	
Compressive Strength ASTM D695	12200 psi (84 MPa)	
Solids Content	100%	
Viscosity (A&B)	300 +/-50 cps	
VOC Content	9 g/l	
DE 500 hr ASTM 3424	5	

Surface Preparation

Concrete should be clean, dry and free of grease, oil, paint, curing agents or any contaminants that may inhibit proper adhesion. Concrete should be cured at least 28 days before applying the coating system. If the concrete slab has been installed within 28 days, the Resintek Systems MVB FAST moisture mitigation system can be considered system (refer to the Resintek Systems MVB FAST technical data sheet for application details).

Proper testing procedures should be practiced with regards to soil acidity and moisture vapor transmission. Take a pH reading to ensure concrete is neutral (a reading between 5 and 9 is acceptable). Use a Tramex® CME / CMExpert to measure the moisture content of the concrete slab. Moisture content must be below 4% before applying the product. It is necessary to take several measurements at various places on the slab. If the reading is higher than 4%, steps will be required to neutralize the soil moisture. The first thing to do is to make sure that the floor is completely dry before application. Floors with higher results can receive the Resintek Systems MVB FAST moisture mitigation.

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Surface must be shot blasted or prepared with an equivalent mechanical means in line with CSP-2 or more depending on the application. Ensure the surface is free of contaminants, and the pores are open to allow the product to penetrate.

If the product is applied over an existing Resintek Systems flooring system that has been cured for a period longer than 24 hours, it should be sanded with a proper floor machine. A mechanical bond to a sanded surface is required and the pores of the existing coating must be opened for better adhesion. Vacuum dust and properly wipe the surface with alcohol or solvent prior applying the Resintek Systems LV UV. The alcohol or solvent must be completely evaporated before applying the product. This preparation is necessary to ensure proper adhesion. Conduct adhesion tests if there is a doubt about surface preparation.

Mixing

Before final mixing, pre-mix part A at low speed using a Jiffy® or an Exomixer® mixer blade. If a metal pigment system is being considered, it is imperative to read the Resintek Systems Metallic Pigments data sheet for mixing times as well as application advice.

Use the same batch number when working with pre-tinted products. In the event that different batch numbers have to be used for a same job, we recommend pre-mixing all part A's individually, then mix together part A's from the different batch numbers for two minutes until homogenous color. Then, using a Jiffy® or an Exomixer® mixer blade, mix two parts of A and one part of B together at low speed in a separate container. The mixing container must be clean and free of any outside particle. Mix thoroughly for a minimum of three minutes, until a completely homogeneous mixture is obtained. Use a low speed drill (300-450 rpm) to minimize the air entrapment. It is recommended to activate the mixer in the reverse mode after the first 90 seconds for the liquid to mix from the bottom of the mixing can to the top. Make sure to scrape sides and bottom of mixing container so no unmixed material remains. Mix only the necessary quantity to be used according to the specified pot life / working time. Once the product is properly mixed, it needs to be immediately poured on the floor. Leaving mixed material for too long in a mixing pail will create an exothermic reaction and the product will no longer be usable.

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Application

Apply only when air and slab temperature is between 16°C / 61°F - 30°C / 86°F and the relative humidity of less than 85%. If a heated floor is installed, ensure that the system is turned off 2-4 hours (depending on type of radiant floor) before application and for the full duration of the cure. The product has been designed to adhere to concrete surfaces.

The Resintek Systems LV UV is self-priming. When used as a base coat, apply with a squeegee in thin coat without back rolling to seal properly the surface, this will help reduce the creation of pin holes. Most porous concrete are affected with outgasing, which raises the probabilities of pinholes creation. If pinholes appear within the working time window, we recommend going back on the surface with a spike or regular roller to burst the bubbles. This will reduce significantly the chances of bubbles reappearing. Do not exceed working time window. Take into account that hot temperatures will reduce working time. If there is a significant presence of pinholes after applying the first coat due to the porosity of the concrete, sand and plug the pinholes with epoxy gel. For colored versions, the use of aggregates can also help to fill in pinholes. For the second coat, repeat the same steps and back roll the product.

For aesthetic metallic or clear systems, we recommend a thickness level between 30 and 50 mils for the topcoat. It is recommended to apply the product in a multi-directional (north-south, east-west) motion to ensure proper coating thickness. The Resintek Systems Metallic Pigments system requires specific installation steps (Refer to the Resintek Systems Metallic Pigments technical data sheet). It is crucial to prevent sweat or water droplets from coming into contact with the product while blending the product or spreading/rolling it out. This precaution is necessary to avoid the formation of circles and/or fisheyes. Additionally, wall-mounted Air Wick type devices and aerosols should be avoided during both the installation and drying processes, as they can also cause circles or fisheyes.

A variation in pigment concentration among different mixtures could have a perceptible impact on the effect and color perception. Make sure to maintain the same ratio throughout the entirety of each project.

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For better stain and chemical resistance, we strongly recommend the usage of a Resintek Systems WBU or Resintek Systems PA 85 over the Resintek Systems LV UV or over any epoxy product other than a Novolac epoxy. In addition to the superior chemical resistance and cleanability, the matte version of the ResinTek Systems WBU MATTE possesses a unique characteristic which is to make the scratches less apparent. The Resintek Systems WBU or Resintek Systems PA 85 products also provide additional UV protection that will significantly slow the yellowing of the epoxy.

Recoat

Do not recoat without sanding if last coating of the product has been applied for more than 24 hours. The floor surface should be sanded/abraded until a uniform dullness is achieved. There should be no gloss on the prior coating after vacuuming and before applying the next coat.

For best results, we recommend light sanding between all coats. Must be wiped cleaned using isopropyl alcohol or xylene and wait for complete evaporation before proceeding with the next coating application.

Limitations

Requires a dry substrate. Moisture content of the substrate must be measured with a Tramex® CME / CMExpert and must be below 4% before applying the product. This product should not be applied to concrete substrates that show high levels of moisture/humidity unless a moisture ResinTek Systems MVB FAST moisture mitigation system is used. The ResinTek Systems LV UV is not compatible with the ResinTek Systems Universal Pigment Pods. Although this product may be applied in a wide range of thickness, limitations may apply when taking into consideration curing time. Everything else being equal, thicker is the film, quicker is the curing time. Drying time will be faster in a hot environment. Conversely, the drying time will be longer in a cold environment and the appearance of the surface may be affected. Leaving mixed material for too long in a mixing pail will create an exothermic reaction and the product will no longer be usable. Do not clean the finished surface during the week following installation. Keep the product stored at room temperature to ensure consistent results. Not suited for exterior applications. Although ResinTek Systems makes reasonable efforts to control the quality of the finished product and its components, ASTM results may vary depending on the quality of the inputs delivered to ResinTek Systems.

In the event that dew point conditions lead to condensation persisting above the concrete surface, and for which the grinding process fails to eliminate this condensation, it is crucial to thoroughly dry the surface before installation. Neglecting this step may result in adhesion issue.

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The usage of direct-fired, unvented and certain other heat sources are not recommended as they emit byproducts that may negatively impact the curing process of the resin and lead to defects such as whitening, loss of adhesion, or other surface imperfections. ResinTek Systems stands behind the quality of its products. However, ResinTek Systems cannot guarantee results since ResinTek Systems has no control over surface preparation, operating conditions, and application procedures. Clients are solely responsible to test ResinTek Systems products to determine if they perform as expected. To meet our strict requirements, we are continuously testing our coatings and on occasion, formulations may be modified to improve certain properties within each coating. Information and data included in this reference document may not be up to date as of the date of reference. Contact ResinTek Systems for further information regarding the limitations of this product. This product is not immune to transfers of plasticizers contained in rubber, including car tires. Although the transfer of plasticizers phenomenon is very rare, under specific circumstances combining high tire temperature with i) high levels of plasticizers, and/or (ii) certain plasticizer types and/or (iii) certain tire types, it is possible for plasticizers to transfer from the tire rubber to the floor coating. This phenomenon is irreversible and can cause staining of the coated area. Tires should therefore cool down prior to the parking of the vehicle in the coated area.

Pressure washing and power washing (power washing involves water heating while pressure washing uses cold water) must be used with caution. Extreme pressure could damage the coating. Using hot water could also cause irreversible damage. When used to clean polymer coatings, water temperature must not exceed 49°C / 120°F and should be ideally between 32°C and 43°C / 90°F and 110°F.

Exposure to certain chemicals may cause reactions similar to those experienced with allergies. Chemicals that may cause sensitivity include synthetic and natural substances found in the Part A or the Part B of flooring or casting products. Once cross linked and completely cured, those substances are inert and therefore should not result in allergic reactions. Raw materials used by ResinTek Systems do not differ significantly from comparable products manufactured by our competitors.

Refer to the most recent Material Safety Data Sheet prior using this product.

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Available Colors

Clear, Metallic Colors



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