

# KEY RESIN #510LV EPOXY BINDER

## DESCRIPTION

**KEY RESIN #510LV** is a multipurpose epoxy binder for **KEY MORTAR SYSTEMS** and **KEY QUARTZ SYSTEMS**. This all purpose epoxy resin is characterized as an excellent general purpose material with good clarity and color retention. It is essentially odorless and can therefore be used in occupied areas.

## KEY ADVANTAGES

- Good troweling properties when used with **Key Mortar Systems**.
- Excellent color retention when used with **Key Quartz** and **Key Mortar Systems**.
- Low odor for use in occupied areas.
- Low viscosity - good wetting properties
- Available in "fast cure" systems.
- USDA approved for use in food handling applications.

## KEY CONSIDERATIONS

- Minimum application temperature of 50°F (Contact **KEY RESIN COMPANY** for Low Temperature Cure).
- Substrate must be free of curing agents and any foreign materials.
- Slight color variation can be expected from batch to batch.
- Pigmented version should **not** be used as a coating.

## COMPOSITION

100% solids amine cured Epoxy Resin.

## APPLICATION

### SURFACE PREPARATION

**Surface Preparation** is the most critical portion to any successful resinous flooring system application. All substrates must be properly prepared as outlined in **KEY RESIN COMPANY'S TECHNICAL BULLETIN #1**. Work must be performed by trained or experienced contractors or maintenance personnel. The **KEY RESIN COMPANY** service department is pleased to answer any questions.

### INSTALLATION

Will vary with application method.

## PHYSICAL PROPERTIES

Color	Clear or colored. <b>See Key Resin Color Card.</b>
Gloss, 60°F	85-100
Weight/gallon	9.00-9.5 mixed
Solids Content	100%
Mix Ratio	3A to 1B by volume
Pot Life	30-40 minutes @ 70°F
Viscosity	125 cps, mixed approx.
VOC	0

## DRY TIME

10-20 mil film	10-14 hrs.
Light Traffic	16 hrs.
Ultimate Cure @ 74°F	5 days
@ 50°F	14 days

## CHEMICAL RESISTANCE

REAGENT	RATING	REAGENT	RATING
Acetic Acid-5%	L	Lactic Acid-15%	R
Acetone	L	Methyl Ethyl Ketone	L
Bleach	L	Nitric Acid-10%	R
Citric Acid-30%	R	Skydrol	R
Crude Oil	R	Sodium Hydroxide-50%	R
Diesel Fuel	R	Sulfuric Acid-20%	R
Ethylene Glycol	R	Toluene	R
Fatty Acids	L	Urea	R
Gasoline	R	Vinegar	L
Hydrochloric Acid-15%	R	Xylene	R

R-Recommended for continuous service.

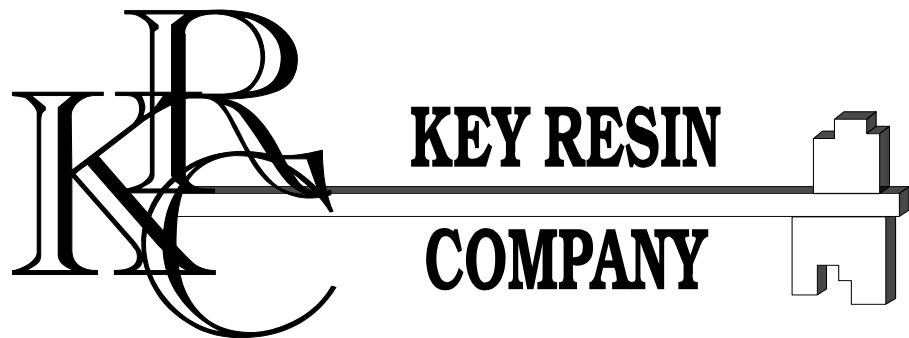
L-Limited recommendation, occasional spills.

## PERFORMANCE PROPERTIES

Tensile Strength ASTM-D-638	8,500 psi
Elongation ASTM-D-638	5.5%
Adhesion to metal	2500 psi
Adhesion to concrete ACI Committee 403	350 psi (concrete fails)
Hardness ASTM-D-2240	80 (Shore D)
Abrasion Resistance ASTM-C-501	35-40 mg loss (CS-17 wheel, 1 kg load, 1000 cycles)
Service Temperature MIL- D-3134F	160 F (immersion) 185 F (dry heat)
Impact Resistance MIL-D-3134F §. 4.7.3	Withstands 16ft./lbs. no cracking, delamination or chipping.
Indentation MIL-D-3134F § 4.7.4	Withstands 2,000 lbs./sq.in. for 30 min. without indentation.
Elevated Temperature Resistance MIL-D-3134F §4.7.5	No slip or flow at required temperatures at 158 F
Water Absorption ASTM-D-670-63 (24. hr. immersion)	0.10% maximum
Flexural Strength ASTM-D-790	8,000 psi
Compressive Strength ASTM-D-695	11,000 psi

## WARRANTY

**Key Resin Company ("Key")** warrants for a period of one (1) year that its products will be free of manufacturing defects and will be in conformity with published specifications when handled, stored, mixed and applied in accordance with recommendations of **Key**. If any product fails to meet this warranty, the liability of **Key** will be limited to replacement of any non-conforming material if notice of such non-conformity is given to **Key** within (1) one year of delivery of materials. **Key** may in its discretion refund the price received by **Key** in lieu of replacing the material. No customer, distributor, or representative of **Key** is authorized to change or modify the published specifications of this warranty in any way. No one is authorized to make oral warranties on behalf of **Key**. In order to obtain replacement or refund the customer must provide written notice containing full details of the non-conformity. **Key** reserves the right to inspect the non-conforming material prior to replacement. EXCEPT FOR THE EXPRESSED WARRANTY STATED ABOVE, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE. **KEY'S** OBLIGATION SHALL NOT EXTEND BEYOND THE OBLIGATIONS EXPRESSLY UNDERTAKEN ABOVE AND **KEY** SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO THE PURCHASER OR ANY THIRD PARTY FOR ANY LOSS, COST, EXPENSE, DAMAGE OR LIABILITY, WHETHER DIRECT OR INDIRECT, OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.



**KEY RESIN**

**COMPANY**

**PART A RESIN**

**KEY EPOXY BINDER #510**

(FOR USE ONLY WITH KEY EPOXY BINDER #510 HARDENER, PART B)

**MIX RATIO BY VOLUME - 4 PARTS A TO 1 PART B**

**WARNING**

CONTAINS EPOXY RESIN, SUBSTITUTED PHENOL, AND BENZYL ALCOHOL. MAY CAUSE SKIN SENSITIZATION OR OTHER ALLERGIC REACTIONS. AVOID BREATHING VAPORS. AVOID PROLONGED OR REPEATED CONTACT.

- 4.0 U.S. GALLON
- 5.0 U.S. GALLONS
- 50 U.S. GALLONS

**COLOR** \_\_\_\_\_

**BATCH NUMBER** \_\_\_\_\_

**DESCRIPTION:** **KEY #510** is a 100% solids epoxy binder. It may be used as a binder in epoxy troweled surfacers, polymer concrete, or industrial grouts. It can also be used as a binder for self leveling surfacers.

**SURFACE PREPARATION:** New concrete should be cured a minimum of 21 days. Concrete should be structurally sound and free of contaminants. New concrete should be abrasive blast cleaned or acid etched, rinsed and neutralized, if necessary. Existing concrete should have oil, grease, and other contaminants removed before abrasive cleaning. Acid etching will not remove any existing coating. Surface may be damp but preferably dry. See **Key Resin Technical Bulletin #1 "Surface Preparation."**

**MIXING:** Do not mix until the surface to be treated has been prepared and primed. Mix 4 parts per volume of Part A with 1 part by volume of Part B using a low speed power mixer. Mix for a full 3 minutes. Both parts are light in color and have the same appearance when poorly mixed as when well mixed. The working time for 1 gallon of mixed **KEY #510** is approximately 40 minutes at 70°. Higher temperatures or larger quantities will have shorter working times.

**APPLICATION:** Application temperature of substrate should be above 55°F. For temperatures below 55°F use low temperature hardener. For troweled systems, add 5 to 6 parts of clean, dry, graded silica sand. Consult **Key Resin Company** for recommendations. Screed to specified thickness and finish by hand or power trowel. For use as a coating, use a notched squeegee to meter **KEY #510** to the desired thickness. Then back roll with a phenolic core medium nap roller if necessary.

**CURE:** **KEY #510** will be ready for recoat in 6-8 hours at 70°F; light traffic after overnight cure, and reaches full cure in 72 hours.

**CLEAN UP:** Clean up tools and equipment immediately with MEK, xylene or proprietary epoxy thinner.

**CAUTION:** These solvents will be flammable, keep away from all sources of ignition. Comply with manufacturer's recommendations for handling. Clean skin with soap and water.

**WARNING**

CONTAINS EPOXY RESIN. MAY CAUSE SKIN SENSITIZATION OR OTHER ALLERGIC REACTIONS. AVOID REPEATED OR PROLONGED CONTACT. DO NOT TAKE INTERNALLY. WEAR GOGGLES, GLOVES AND BODY COVERING CLOTHING WHEN HANDLING.

**FIRST AID**

**EYES:** Flush with water for at least 15 minutes and call a physician.

**SKIN:** Wash affected area thoroughly with soap and water.

**INHALATION:** Remove to fresh air. If breathing difficulty develops, call a physician.

**INGESTION: DO NOT** induce vomiting. Call a physician.

See MATERIAL SAFETY DATA SHEET for more details.

**SHELF LIFE:** ONE (1) YEAR FROM DATE OF MANUFACTURE.

**IN AN EMERGENCY CALL 1-800-424-9300.**

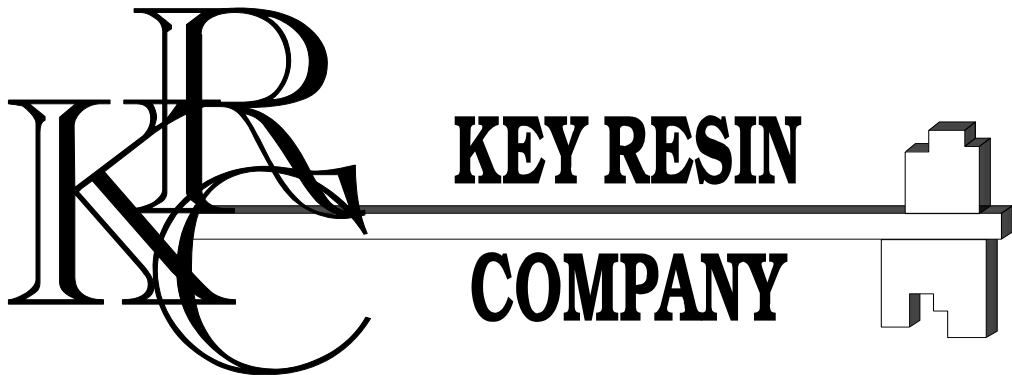
**FOR PROFESSIONAL USE ONLY!**

**KEEP AWAY FROM CHILDREN!**

KEY 510-A

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Key Epoxy Binder #510-3



# PART B HARDENER KEY EPOXY BINDER #510

(FOR USE ONLY WITH KEY EPOXY BINDER #510 RESIN, PART A)  
MIX RATIO BY VOLUME - 4 PARTS A TO 1 PART B

## WARNING

CONTAINS AMINE, SUBSTITUTED PHENOL, AND BENZYL ALCOHOL.  
CAN CAUSE CHEMICAL BURNS TO SKIN AND EYES. VAPOR HARMFUL.

- 1.0 U.S. GALLON
- 5.0 U.S. GALLONS
- 50 U.S. GALLONS

BATCH NUMBER \_\_\_\_\_

**USE WITH ADEQUATE VENTILATION.**  
Avoid breathing vapor. Avoid all contact with skin and eyes. Do not take internally. Wear gloves, goggles, and body covering clothing when handling.

In case of spill, absorb and dispose of in accordance with state and local regulations.

Discard contaminated shoes. Wash contaminated clothing before reuse.

Get medical attention immediately.

## WARNING

CONTAINS AMINE, SUBSTITUTED PHENOL, AND BENZYL ALCOHOL. CAN CAUSE CHEMICAL BURNS TO SKIN AND EYES. VAPORS HARMFUL. PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA, SKIN SENSITIZATION, OR OTHER ALLERGIC RESPONSE. THESE HAZARDS ARE NOT PRESENT WHEN KEY #510 IS FULLY CURED.

## FIRST AID

**INHALATION:** Remove to fresh air. Administer oxygen if necessary. Get medical attention if effects persist.

**EYES:** Flush immediately with water for at least 15 minutes. Get medical attention.

**SKIN:** Flush affected area immediately with water for at least 15 minutes. Remove contaminated clothing. Get medical attention if swelling or reddening of skin occurs.

**INGESTION: DO NOT** induce vomiting. Dilute stomach contents with milk or water. Get medical attention immediately

See MATERIAL SAFETY DATA SHEET for more details.

**SHELF LIFE:** ONE (1) YEAR FROM DATE OF MANUFACTURE.

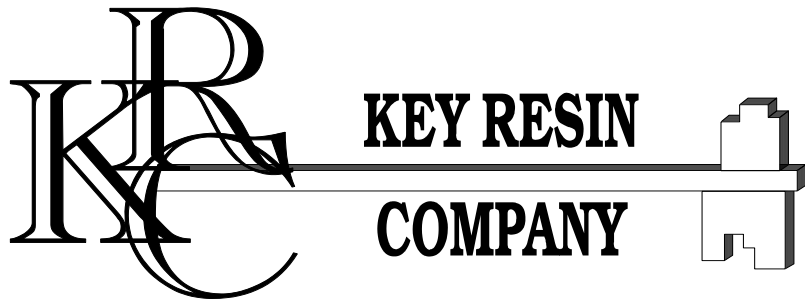
**IN AN EMERGENCY CALL 1-800-424-9300.**

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KEY 510-B

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## PART A RESIN

# KEY EPOXY BINDER #510

(FOR USE ONLY WITH KEY EPOXY BINDER #510 HARDENER, PART B)

MIX RATIO BY VOLUME - 4 PARTS A TO 1 PART B

### WARNING

CONTAINS EPOXY RESIN, SUBSTITUTED PHENOL, AND BENZYL ALCOHOL. MAY CAUSE SKIN SENSITIZATION OR OTHER ALLERGIC REACTIONS. AVOID BREATHING VAPORS. AVOID PROLONGED OR REPEATED CONTACT.

½ U.S. GALLON

COLOR \_\_\_\_\_

BATCH NUMBER \_\_\_\_\_

**MIXING:** Do not mix until the surface to be treated has been prepared and primed. Mix 4 parts per volume of Part A with 1 part by volume of Part B using a low speed power mixer. Mix for a full 3 minutes. Both parts are light in color and have the same appearance when poorly mixed as when well mixed. The working time for 1 gallon of mixed **KEY #510** is approximately 40 minutes at 70°. Higher temperatures or larger quantities will have shorter working times.

**APPLICATION:** Application temperature of substrate should be above 55°F. For temperatures below 55°F use low temperature hardener. For troweled systems, add 5 to 6 parts of clean, dry, graded silica sand. Consult **Key Resin Company** for recommendations. Screed to specified thickness and finish by hand or power trowel. For use as a coating, use a notched squeegee to meter **KEY #510** to the desired thickness. Then back roll with a phenolic core medium nap roller if necessary.

**CURE:** **KEY #510** will be ready for recoat in 6-8 hours at 70°F; light traffic after overnight cure, and reaches full cure in 72 hours.

**CLEAN UP:** Clean up tools and equipment immediately with MEK, xylene or proprietary epoxy thinner.

**CAUTION:** These solvents will be flammable, keep away from all sources of ignition. Comply with manufacturer's recommendations for handling. Clean skin with soap and water.

### WARNING

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### FIRST AID

**EYES:** Flush with water for at least 15 minutes and call a physician.

**SKIN:** Wash affected area thoroughly with soap and water.

**INHALATION:** Remove to fresh air. If breathing difficulty develops, call a physician.

**INGESTION:** **DO NOT** induce vomiting. Call a physician.

See MATERIAL SAFETY DATA SHEET for more details.

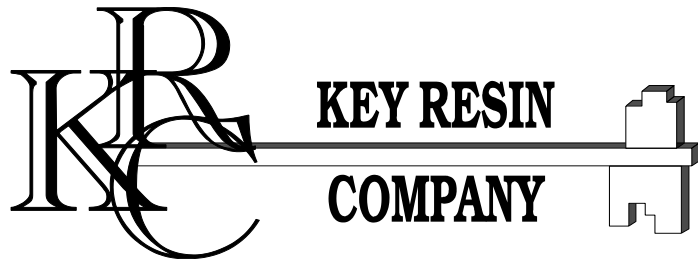
**SHELF LIFE:** ONE (1) YEAR FROM DATE OF MANUFACTURE.

**IN AN EMERGENCY CALL 1-800-424-9300.**

**FOR PROFESSIONAL USE ONLY!**

**KEEP AWAY FROM CHILDREN!**

KEY 510-A



## PART B HARDENER KEY EPOXY BINDER #510

(FOR USE ONLY WITH KEY EPOXY BINDER #510 RESIN, PART A)  
MIX RATIO BY VOLUME - 4 PARTS A TO 1 PART B

### WARNING

CONTAINS AMINE, SUBSTITUTED PHENOL, AND BENZYL ALCOHOL.  
CAN CAUSE CHEMICAL BURNS TO SKIN AND EYES. VAPOR HARMFUL.

1 U.S. QUART

BATCH NUMBER \_\_\_\_\_

**USE WITH ADEQUATE VENTILATION.** Avoid breathing vapor. Avoid all contact with skin and eyes. Do not take internally. Wear gloves, goggles, and body covering clothing when handling. In case of spill, absorb and dispose of in accordance with state and local regulations. Discard contaminated shoes. Wash contaminated clothing before reuse. Get medical attention immediately.

### WARNING

CONTAINS AMINE, SUBSTITUTED PHENOL, AND BENZYL ALCOHOL. CAN CAUSE CHEMICAL BURNS TO SKIN AND EYES. VAPORS HARMFUL. PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA, SKIN SENSITIZATION, OR OTHER ALLERGIC RESPONSE. THESE HAZARDS ARE NOT PRESENT WHEN **KEY #510** IS FULLY CURED.

### FIRST AID

**INHALATION:** Remove to fresh air. Administer oxygen if necessary. Get medical attention if effects persist.

**EYES:** Flush immediately with water for at least 15 minutes. Get medical attention.

**SKIN:** Flush affected area immediately with water for at least 15 minutes. Remove contaminated clothing. Get medical attention if swelling or reddening of skin occurs.

**INGESTION: DO NOT** induce vomiting. Dilute stomach contents with milk or water. Get medical attention immediately.

See MATERIAL SAFETY DATA SHEET for more details.

**FOR PROFESSIONAL USE ONLY!**

**KEEP AWAY FROM CHILDREN!**

KEY 510-B

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Key Epoxy Binder #510-7







**PART B HARDENER  
KEY EPOXY BINDER #510**

**(FOR USE ONLY WITH KEY EPOXY BINDER #510 RESIN, PART A)  
MIX RATIO BY VOLUME - 4 PARTS A TO 1 PART B**

**WARNING**

CONTAINS AMINE, SUBSTITUTED PHENOL, AND BENZYL ALCOHOL. CAN CAUSE CHEMICAL BURNS TO SKIN AND EYES. VAPORS HARMFUL. PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA, SKIN SENSITIZATION, OR OTHER ALLERGIC RESPONSE. THESE HAZARDS ARE NOT PRESENT WHEN **KEY #510** IS FULLY CURED.

**1 pint**

**Batch:** \_\_\_\_\_

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See MATERIAL SAFETY DATA SHEET for more details.

**SHELF LIFE:** ONE (1) YEAR FROM DATE OF MANUFACTURE.

**IN AN EMERGENCY CALL 1-800-424-9300**

**FOR PROFESSIONAL USE ONLY!**

**KEEP AWAY FROM CHILDREN!**

KEY 510-B



**PART B HARDENER  
KEY EPOXY BINDER #510**

**(FOR USE ONLY WITH KEY EPOXY BINDER #510 RESIN, PART A)  
MIX RATIO BY VOLUME - 4 PARTS A TO 1 PART B**

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**1 pint**

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KEY 510-B