



# KEY #597-MVT PENETRATING PRIMER

## DESCRIPTION

**KEY #597-MVT** is a low viscosity, water-emulsion, penetrating epoxy primer designed for use as a moisture mitigation treatment on concrete with excessive moisture vapor transmission or moisture content. **KEY #597-MVT** will tolerate moisture transmission rates (MVT) up to 10 pounds moisture per 1000 square feet per 24 hours as tested according to ASTM-F-1869-11 and moisture content up to 90% relative humidity as tested according to ASTM-F-2170-11.

## KEY ADVANTAGES

- Excellent Adhesion to Properly Prepared Concrete Which Has a Minimum of 28 Days Cure
- Fast Dry Time
- Low Odor During Application and Cure
- Zero V.O.C., Contributes Towards LEED Credits, Environmentally Friendly
- Greatly Reduces Concrete Outgassing
- Moisture Tolerant Up To 10 lbs. MVT and 90% R.H.

## KEY CONSIDERATIONS

- Substrate temperature must be a minimum of 55°F and ambient relative humidity below 85% for proper curing.
- Substrate must be free of dirt, waxes, curing agents, densifiers, hardeners, fiber reinforcement, ASR byproducts, and other foreign materials.
- Slab on grade must have an efficient puncture resistant vapor barrier minimum 10 mils thickness.
- Substrate temperature must be 5°F above measured dew point.
- To be used only on standard mix design concrete. A certain degree of porosity of the slab is necessary for proper penetration of the resin. Any special mix design or high density concrete must be reviewed by Key Resin Technical Service prior to use in the installation.
- Do not use on lightweight concrete slabs unless approved by Key Resin Technical Service.
- Primer application must absorb completely into the concrete pores. Do not puddle or apply a thick resin-rich surface layer. Apply Key #502 Epoxy Primer over Key #597-MVT unless otherwise approved by Key Resin Technical Service.

## COMPOSITION

Water-Borne Epoxy Resin/Hardener



## COLOR SELECTION

KEY #597-MVT is available in clear formulation only. Milky emulsion when mixed, clear/amber when dry.

## APPLICATION

### SURFACE PREPARATION

**Surface Preparation** is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared as outlined in **KEY RESIN COMPANY'S TECHNICAL BULLETIN #1**. For use as MVT primer (>28 day old concrete), surface must be shot blasted or profiled with a grinder to a minimum CSP-3 profile and tested for moisture content to confirm moisture limit of **KEY #597-MVT** is not exceeded. Prepared surface must be able to pass a water absorption test to confirm adequate porosity: Apply dime size water droplets randomly across floor surface using eyedropper, at least one per 100 square feet using eye dropper. Water must completely absorb into concrete within 60 seconds. Areas that fail this test must be further prepared until passing the test. Work must be performed by trained or experienced contractors or maintenance personnel. The **KEY RESIN COMPANY Technical Service Department** is available to answer any questions.

### MIXING

**KEY #597-MVT** comes in a premeasured kit.

Mix each component of **KEY #597-MVT** prior to combining. Mix Part A with Part B and mix thoroughly. **KEY #597** is diluted with an equal amount of water to reduce the solids content.

Substrate and all materials must be maintained at 55°-85°F for 24 hours before, during and after installation. Thoroughly mix Part A and Part B with a slow speed mixer for a minimum of 2-3 minutes. This will result in a creamy emulsion. Add an equal amount of water *slowly* while continuously mixing. Mix for another 3 minutes to ensure homogenous consistency. Be sure to use a suitable size mixing container since the mixed volume of material will double.

### CLEAN UP

Clean skin with soap and water. Tools and equipment should be cleaned with xylene or lacquer thinner. Consult Material Safety Data for safety and health precautions.

### RECOAT

**KEY #597-MVT** can be top coated with Key #502 very rapidly. Cure time for light foot traffic is 5 hours, recoat time is 3-48 hours at 75°F and 50% RH. Allow for additional cure time in cooler temperatures and higher humidity.

## COVERAGE

**KEY #597-MVT** must be applied at approximately 200-350 ft<sup>2</sup> per gallon depending on porosity, except highly porous substrates may require more material.

## TECHNICAL DATA

Viscosity @ 75 °F	200-300 cps
Solids Content	38% mixed with water
Volatile Organic Content (VOC)	Zero
Bond Strength to Concrete	350 psi (100% concrete failure)
Weight Per Gallon	8.75 pounds per gallon, mixed

## CURE/DRY TIME

Pot Life	1 hour minimum
Dry to Touch	1.5-2.0 hours @ 75° F
Dry Hard, light foot traffic	5 hours @ 75° F
Recoat, minimum	3-5 hours @ 75° F
Recoat, maximum	48 hours @ 75° F

## BATCHING and INSTALLATION INFORMATION

KEY #597-MVT PART A	0.8 gallon (3.2 qts.)
KEY #597-MVT PART B	1.0 gallon
Clean Water	1.8 gallons
<b>Total</b>	3.60 gallons
Coverage (200-350 ft <sup>2</sup> /gal.)	720 - 1260 ft <sup>2</sup>

Apply **KEY #597-MVT** at approximate rate of 200-350 ft<sup>2</sup> per mixed gallon. Using a flat squeegee, spread material at the recommended rate. Pull the squeegee slowly with a puddle in front of the squeegee. Allow for sufficient wetting of the slab and back-roll with a 1/4" nap roller. Very porous concrete may require additional material. **Important:** Avoid leaving puddles or a resin-rich surface film, immediately brush or roll out excess material. Resin-rich surface material may not cure properly! ***Final appearance when cured should NOT be a glossy film.***

## AVAILABILITY

Key Resin materials are available throughout the United States, Canada, and a number of other countries. Contact the **Key Sales Representative** in your area for details.

## MAINTENANCE

**KEY #597-MVT** is designed for use as a penetrating concrete primer and not a top coat requiring maintenance information. Finished systems used in conjunction with **KEY #597-MVT** should be accompanied with proper maintenance guidelines.

## TECHNICAL SERVICE

**Key Resin Company** provides services and consultations on material selection, specification, troubleshooting, and other information on the proper repair and protection of concrete surfaces. **Key Resin Sales/Technical Representatives** are available to assist you. Telephone 888.943.4532 or visit [www.keyresin.com](http://www.keyresin.com).

## 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.**