

# KEY #597-MVT PENETRATING PRIMER

Product Data Sheet



## DESCRIPTION

**KEY #597-MVT** is a low viscosity, water-emulsion, penetrating epoxy primer designed for use as a moisture vapor treatment on concrete floor slabs with excessive moisture vapor emission rates or a high internal moisture content. **KEY #597-MVT** will tolerate moisture vapor emission rates (MVER) up to 20 lbs moisture per 1,000 square feet per 24 hours when tested in accordance with ASTM F1869. When tested in accordance with ASTM F2170 it will tolerate up to 99% relative humidity. If moisture tests exceed these limits contact **Key Resin Technical Service** for recommendations.

## KEY ADVANTAGES

- Excellent adhesion to properly cured and prepared concrete that is a minimum of 28 days old
- Proven performance as a moisture mitigation primer
- Low-odor during application and cure
- Meets USGBC LEED criteria for IEQ 4.2 for low VOC
- Greatly reduces concrete outgassing
- Moisture tolerant up to a 20 lb MVER and 99% RH

## KEY CONSIDERATIONS

- Slabs-on-ground must have a minimum 10 mil thick vapor retarder that conforms to the requirements of ASTM E1745 Class A with the permeance requirement modified to not exceed 0.01 perm
- Vapor retarder must be installed in direct contact with the underside of the slab
- Substrate temperature must be a minimum of 55°F
- Concrete slab surface must be free of dirt, curing compounds, densifiers, oil or wax-based sweeping compounds, and other foreign materials
- Concrete slab must not be in an active state of ASR, NSAR, or exposed to hydrostatic pressure
- Primer must absorb completely into concrete pores, do not puddle
- For use with standard concrete mixtures, special concrete mixtures or high-density mixtures must be reviewed with Key Resin Technical Services

## COVERAGE

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

## CURE/DRY TIME

|                              |  |
|------------------------------|--|
| Working Life                 | 60 min @ 75°F, 50% RH  |
| Dry to Touch                 | 1.5-2.0 hrs @ 75°F, 50% RH   |
| Dry Hard, light foot traffic | 5 hrs @ 75°F, 50% RH   |
| Recoat, minimum              | 12 hrs @ 75°F, 50% RH<br>Additional cure time required in cooler temps or very high humidity |
| Recoat, maximum              | 48 hrs @ 75°F, 50% RH  |

## 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 Technical Bulletin #1**. 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 porous. Test prepared surface in accordance with ASTM F3191, the prepared surface must begin absorption of a single drop of water in 60 seconds. Apply water droplets randomly across floor surface, at least one per 100 square feet. Areas that fail this test must be further prepared until passing the test, unless otherwise approved by Key Resin Technical Service. Work must be performed by trained or experienced contractors or maintenance personnel. The **Key Resin Technical Service Department** is available to answer any questions.

### MIXING & APPLICATION

**KEY #597-MVT** comes in a premeasured 1.8 gallon kit. Substrate and all materials must be maintained at 55°F-85°F for 24 hours before, during and after installation. Thoroughly mix Part A and Part B with a Jiffy (only) mixer with **sufficient speed to create a vortex** for a minimum of 2-3 minutes. This will result in a creamy emulsion. Add an equal amount of 1.8 gallons clean potable water slowly while continuously mixing. Mix for another 2-3 minutes to ensure homogenous consistency. Be sure to use a suitable size mixing container since the mixed volume of material will double. **Application:** Pour ribbon of material and pull slowly with squeegee to allow for complete absorption into concrete, followed with backrolling. Avoid leaving puddles in low spots, immediately brush or roll out excess material. Consult with **Key Resin Technical Service** for further installation instructions and other important information.

### CLEAN UP

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

### RECOAT

**KEY #597-MVT** cure time for recoat is 12-48 hours at 75°F and 50% RH.

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### TECHNICAL DATA

|  |                            |
|--|----------------------------|
| Solids Content   | 38% mixed with water       |
| Volatile Organic Content (VOC) <50 g/L, compliant to low VOC (EPA Method 24) | Rule 1113 in all 50 states |
| Weight/gal   | 8.75 lbs/gal, mixed        |
| Viscosity @ 75°F   | <100 cps                   |

### AVAILABILITY

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

### PHYSICAL PROPERTIES

|                      |            |  |
|----------------------|------------|--|
| Adhesion to Concrete | ASTM D7234 | 300-400+ psi<br>(Concrete Failure,<br>varies by concrete strength) |
|----------------------|------------|--|

### MAINTENANCE

**KEY #597-MVT** is designed for use as a penetrating concrete primer and not a topcoat 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).

### COLOR SELECTION

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

### COMPOSITION

Water-borne epoxy resin/hardener.

### 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.

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