

KEY #635-MVT *Plus+*

Product Data Sheet



DESCRIPTION

KEY #635-MVT Plus+ is a two component, modified epoxy primer formulated as a moisture vapor treatment to seal concrete floor slabs and prevent moisture-related floor covering and coating problems. **KEY #635-MVT Plus+** has proven to be effective in protecting flooring materials from the potentially adverse effects of high levels of moisture within, or below the slab and is resistant to damage from alkalis within the concrete up to a pH of 14. **KEY #635-MVT Plus+** meets USGBC LEED certification requirements and exceeds the performance requirements in ASTM F3010 "Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems".

KEY ADVANTAGES

- Reduces moisture vapor emission rate through concrete
- Exceeds requirements of ASTM F3010
- Resistance up to 25 lbs MVER on the Calcium Chloride Test (ASTM F1869)
- Resistance up to 100% RH on the RH Probe Test (ASTM F2170)
- Resistance to sustained high alkalinity up to pH 14
- Low odor for use in occupied areas
- Meets USGBC LEED criteria for low VOC
- High physical properties, chemical resistant
- Fast cure time—can be rapidly surfaced with a variety of finished flooring materials
- One coat application at 100 square feet per gallon
- Moisture testing not required
- Sub-slab vapor retarder not required
- Special long-term warranties available when installed by approved contractors – call Key Resin for details

KEY CONSIDERATIONS

- Substrate temperature must be a minimum of 50°F before, during and 72 hours after installation
- Concrete must be properly cured and a minimum of 7 days old at 75°F, continued concrete shrinkage may cause cracks that will telegraph up through the **Key #635-MVT Plus+**
- For use only on properly prepared shot blasted surfaces with a surface profile of CSP-3 to CSP-5; concrete surface must be free of dirt, curing compounds, densifiers, dry shake hardeners, unreacted silicates, chlorides, sulfurous compounds, hydrocarbons, 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
- Fiber reinforced concrete: After surface prep, burn off exposed fibers and brush blast to remove melted residue
- Core testing to exam slab for contaminants is not required but is highly recommended and is the responsibility of the owner or owner's representative—consult with Key Resin for details
- For slabs with previously failed flooring systems, core testing is required at owner's expense—consult with Key Resin for recommendations before proceeding with work
- Alternative recommendations may be available for slabs with water soluble unreacted sodium/potassium silicates or chlorides—consult with Key Resin
- Additional concrete requirements: contact Key Resin
- Concrete outgassing may create pinholes in **Key #635-MVT Plus+**, recoat if pinholes are evident – consult with Key Resin

TYPICAL USES

KEY #635-MVT Plus+ is designed for use as a moisture vapor treatment on concrete floor slabs with excessive moisture vapor emission rates or a high internal moisture content, as required by moisture vapor sensitive floor coverings. **KEY #635-MVT Plus+** can also be an effective primer for fast recoat under many Key Resin Flooring Systems.

APPLICATION

SURFACE PREPARATION

Surface Preparation is the most critical portion for successful application and long-term performance of this material. All substrates must be properly prepared as outlined in Key Resin Technical Bulletin #1 including possible additional requirements specifically for **Key #635-MVT Plus+**. Consult with the Key Resin Technical Service Department.

INSTALLATION

KEY #635-MVT Plus+ requires mechanical mixing and spreading with a squeegee and medium nap roller. For complete installation instructions, contact Key Resin Technical Service.

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.

FLOOR COVERING INSTALLATION

Consult with both **Key Resin Technical Service** and the manufacturers of the floor covering material, adhesive (if used), and self-leveling cement underlayment (if used) to determine all necessary requirements.

COMPOSITION

KEY #635-MVT Plus+ is a highly cross-linked, alkaline resistant epoxy composition.

COLOR SELECTION

KEY #635-MVT Plus+ is available in Clear only or may be tinted with Universal Color Packs, maximum of 1 pack per 3.4 gallon unit unless otherwise approved by Key Resin.

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CURE/DRY TIME

Pot Life	20-25 minutes @ 75°F
Recoat Time	4-5 hrs @ 75°F Minimum 24 hrs @ 75°F Maximum

TECHNICAL DATA

Mixing Ratio	2.4 Parts A to 1 Part B by Volume
Standard Coverage Rate	100 ft ² per gallon (16 mils)
Volatile Organic Content (VOC) (EPA Method 24)	<50 g/L, compliant to low VOC Rule 1113 in all 50 states

PHYSICAL PROPERTIES

Flammability	ASTM D635	Self-Extinguishing
Flash Point	Pensky-Marten Closed Cup	>200°F
Hardness, Shore D	ASTM D2240	88
Adhesion to Concrete	ASTM D7234	300-400+ psi average (Concrete Failure, varies by concrete strength)
Tensile Modulus	ASTM D638	550,000 psi
Permeance at 16 mils thickness (100ft ² per gallon)	ASTM E96	<0.1 grains/hr/ft ² /in.Hg (perm) Exceeds ASTM F3010 requirements
Compressive Modulus	ASTM D695	325,000 psi
Compressive Strength	ASTM D695	14,434 psi
Tensile Strength	ASTM D638	8,687 psi
Tensile Elongation	ASTM D638	1.97%
Alkaline Resistance	ASTM D1308	10% Sodium Hydroxide - unaffected 50% Sodium Hydroxide - unaffected 7 day and 14 day immersion

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.

Rev 6/26/2020 v1.0

CORPORATE OFFICE / EASTERN US / INTERNATIONAL

4050 Clough Woods Drive . Batavia, OH 45103
513.943.4225 888.943.4532 www.keyresin.com

WESTERN US

4330 N. 43rd Avenue, Suite B4, Phoenix, AZ 85031
602.523.9353