

KEY VINYL ESTER BINDER/COATING

Product Data Sheet



DESCRIPTION

KEY VINYL ESTER BINDER/COATING is a high performance vinyl ester resin used with all **Key Vinyl Ester Systems**. Combining high acid, solvent and corrosion resistance with high temperature resistance, **KEY VINYL ESTER BINDER/COATING** is the ideal resin component for secondary containment lining systems, metal plating areas, tank linings, exteriors of high temperature equipment, FGD stacks, trenches, pits, and sumps. The installed system thickness varies by system type and project specifications. **KEY VINYL ESTER BINDER/COATING** may optionally be available with fiberglass cloth reinforcement, mineral flake filler, glass flake filler, or graphite filler.

KEY ADVANTAGES

- Excellent acid, solvent and corrosion resistance
- High heat and impact resistance
- Will not support growth of fungus or bacteria
- Easily maintained

KEY CONSIDERATIONS

- Substrate temperature must be a minimum of 65°F and maximum of 85°F, for colder temp contact Key Resin
- Substrate must be free of excess moisture emissions, paint, curing agents, and other foreign materials which can prevent proper bond
- Substrate irregularities may transmit through finish depending on system thickness
- Vinyl ester resin has a characteristic styrene odor during application and cure, use proper ventilation

COLOR SELECTION

KEY VINYL ESTER BINDER/COATING is available in Light Gray, Red. The addition of graphite filler to Light Gray (when specified) yields a darker charcoal gray. Minimum order requirement: 50 gallons per color. **IMPORTANT:** Due to the nature of this formulation the color tone will vary from batch to batch. If multiple batches will be used in one area, 'box' the materials together on the jobsite before use.

COVERAGE

KEY VINYL ESTER BINDER/COATING applied at 160 ft² per gallon yields 10 mils WFT (approximately 9 mils DFT). Coverage varies by system type.

CURE/DRY TIME

Pot Life*	45-60 min @ 75°F, 50% RH
Recoat* (Min-Max) (Must be tack-free)	6-24/48 hrs @ 75°F, 50% RH (24 hrs exterior, 48 hrs interior)
Light Traffic*	24 hrs @ 75°F, 50% RH
Full Cure & Max. Resistance*	48 hrs @ 75°F, 50% RH

*Cure time varies with temperature, air movement, humidity and thickness

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 Technical Bulletin #1**. Work must be performed by trained or experienced contractors or maintenance personnel. The **Key Resin Technical Service Department** is available to answer any questions.

INSTALLATION

KEY VINYL ESTER BINDER/COATING is installed over a concrete or steel surface. Pre-mix Part A (resin) for 30 seconds using a medium speed drill and jiffy mixer. Add Part B (catalyst/hardener) into the Part A pail and mix thoroughly for 2 minutes. For complete mixing and installation instructions, consult the installation instructions document for the specified system and contact **Key Resin Technical Service**.

CLEAN UP

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

COMPOSITION & PACKAGING

Vinyl ester novolac bis-A blended resin with fillers and styrene. Supplied as a 5 gallon unit consisting of the following: one 5 gallon Part A Resin and one 11 vol. oz. bottle of Part B Catalyst/Hardener.

CHEMICAL RESISTANCE

Refer to **Key Resin Chemical Resistance Guide**, contact **Key Resin Technical Service** for any chemicals not listed.

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TECHNICAL DATA

Mixing Ratio (5 gallon unit)	5 gallons Part A Resin to 11 vol. oz. Part B Catalyst
Solids Content	99%, by volume
Volatile Organic Content (VOC) (EPA Method 24)	<50 g/L, compliant to low VOC Rule 1113 in all 50 states
Flash Point (Setaflash)	Resin: 73°F Catalyst: 176°F
Shelf Life	Resin: 2-3 months @ 75°F Catalyst: 12 months @ 75°F

AVAILABILITY

KEY VINYL ESTER BINDER/COATING is made to order only and can not be returned for credit for any reason. Contact the **Key Resin Representative** in your area for details.

PHYSICAL PROPERTIES

Adhesion to Concrete	ASTM D7240	300-400+ psi (Concrete Failure, varies by concrete strength)
Impact Resistance	Gardner Impact Tester	>120 in/lbs
Hardness, Shore D	ASTM D2240	80
Tensile Strength	ASTM D638	Neat Resin: 5,300 psi Reinforced: 10,000 psi
Thermal Coefficient of Expansion	ASTM C531	6-10 x 10 ⁻⁸
Water Absorption	ASTM D570	.10% maximum
Abrasion Resistance	ASTM C501	30-40 mg
Fungus & Bacterial Growth	MIL-F-52050 §4.4.2.11	Will not support growth of fungus or bacteria when subjected to mildew and bacteria test
Flammability	ASTM D635	Self-Extinguishing over Concrete

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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