

KEY #521 EPOXY

Product Information Sheet



DESCRIPTION

KEY #521 is a general purpose epoxy suitable for use as a body coat/binder or top coat. Designed for a wide variety of applications, **KEY #521** provides an ideal, economical resin for various **Key Resin Systems**. **KEY #521** provides increased barrier thickness and gives added protection to concrete against chemical and abrasive attack. Consult with **Key Resin Technical Service** for recommended use.

KEY ADVANTAGES

- Economical general purpose epoxy resin
- Denser and harder than concrete
- Meets USGBC LEED criteria for low VOC
- Low odor for use in occupied areas
- Medium viscosity - slight orange peel finish
- Meets USDA requirements for incidental food contact

KEY CONSIDERATIONS

- Minimum application temperature of 50°F (Contact **Key Resin** for Low Temperature Cure)
- Substrate must be free of curing agents and any foreign materials
- Concrete must be properly prepared
- Neutral tint base requires addition of pigment pack for all uses to achieve proper cure

COLOR SELECTION

KEY #521 is available in **Key Resin Standard Colors** and custom colors with lab approval, longer lead time and possible added cost. Neutral requires addition of **Key Epoxy Color Pack**.

COMPOSITION

100% solids amine cured epoxy resin.

COVERAGE

KEY #521 will vary with application method and system.

CURE/DRY TIME

| | |
|--------------------------------|-------------------|
| Working Life | 45 minutes @ 70°F |
| Dry to Touch 10-20 mil Film | 10-14 hrs |
| Light Foot Traffic | 16 hrs |
| Ultimate Cure @ 74°F | 5 days |
| Ultimate Cure @ 50°F | 14 days |

CHEMICAL RESISTANCE

| REAGENT | RATING |
|-------------------------|--------|
| Acetic Acid - 5% | R |
| Ammonia Hydroxide - 10% | R |
| Citric Acid - 5% | R |
| Coca-Cola Syrup | R |
| Crude Oil | R |
| Diesel Fuel | R |
| Isopropyl Alcohol | R |
| Ketchup | L |
| Mineral Oil | R |
| Sodium Hydroxide - 50% | R |
| Tri-Sodium Phosphate-5% | R |
| Urea-6.6% | R |
| Ethylene Glycol | R |

R - Recommended for continuous splash/spill service

L - Limited recommendation (occasional spills, may cause slight stain or discoloration)

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

Will vary with system and application method.

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.

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TECHNICAL DATA

| | |
|--|---|
| Mix Ratio | 4 Parts A: 1 Part B by Volume |
| Solids Content | 100% |
| Volatile Organic Content (VOC) (EPA Method 24) | 0 g/L, compliant to low VOC Rule 1113 in all 50 states |
| Weight/gal | 10.5-11 lbs. mixed |
| Viscosity, ASTM D2196 | Mixed: 1200-1700 cps Part A: 3000-6000 cps Part B: 75-150 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.

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.

PHYSICAL PROPERTIES

| | | |
|----------------------------------|--|---|
| Tensile Strength | ASTM D638 | 4,200 - 4.800 psi |
| Smoke Deposited | ASTM E162 | 4 mg maximum |
| Shrinkage | ASTM C531 | <0.5% |
| Flame Spread | ASTM E-162 | 25 maximum |
| Thermal Coefficient of Expansion | ASTM C531 | 17.4 x 10 ⁻⁶ in./in./°F |
| Adhesion to Concrete | ASTM D7234 | 300-400+ psi (Concrete Failure, varies by concrete strength) |
| Hardness, Shore D | ASTM D2240 | 75-80 |
| Abrasion Resistance | ASTM D4060 CS-17 Wheel, 1000 cycles | 65 mg loss |
| Impact Resistance | MIL-D-3134J | Withstands 16ft./lbs. no cracking, delamination or chipping |
| Elevated Temperature Resistance | MIL-D-3134J | No slip or flow at required temperatures |
| Moisture Absorption | ASTM D570 | <0.10% |
| Flexural Strength | ASTM C580 | 5,000 psi |
| Compressive Strength | ASTM C579, 25 Day Cure | 12,000 psi |
| Indentation | MIL-D-3134J | Withstands 2,000 lbs./sq.in. for 30 min. without indentation |
| Heat Deflection Temperature | ASTM D648 | 110°F |

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.