

KEY #446 URETHANE SEALER

Product Data Sheet



DESCRIPTION

KEY #446 is a clear, two component water based aliphatic (non-yellowing) polyurethane with a gloss finish. **KEY #446** is free of the health and environmental problems normally found in solvent-based urethanes, while maintaining excellent performance properties. **KEY #446** has good chemical, stain, and mar resistance. In addition, it's easy to clean and has excellent color retention when tinted with color packs. **KEY #446** is a high performance coating for use in a variety of **Key Resin** seamless floor and wall coating systems. **KEY #446-OP** Orange Peel formulation is also available as special order. For wall coating applications, **KEY #446-OP** provides greater film-build per coat with a tight orange peel finish.

KEY ADVANTAGES

- Low odor for use in occupied areas
- Meets USGBC LEED criteria for low VOC
- Chemical and stain resistant
- UV stable
- Meets USDA requirements

KEY CONSIDERATIONS

- Substrate temperature must be a minimum of 50°F
- Application rate is no less than 250 ft² per gallon, thicker films will show bubbling in the cured film
- Pot life will vary with temperature
- Do not use in areas requiring hot tire pickup resistance
- Use of non-skid additive is recommended for slip resistance

COLOR SELECTION

KEY #446 is available in Clear Gloss, with option to tint using Key Urethane Pigment Packs (UPP) in the following Key Standard Colors: #100 Light Grey, #135 Medium Grey, #170 Dark Grey, #300 Taupe, #435 Tan, #210 White Sand, #600 Slate Blue, Caution Yellow, Caution Red, Black, #001 White. **Important:** Use a maximum of one (1 pint) UPP per 1 gallon of Part A. **Exception:** #001 White requires two (2 pints) UPP per 1 gallon of Part A. **Important:** Pigment must be added only after first thoroughly mixing Part A and Part B. For Matte finish use **KEY #445**. For Satin or Semi-Gloss, **KEY #445 Part A** and **KEY #446 Part A** may be combined, contact **Key Resin Technical Service** for details.

CURE/DRY TIME

Working Life	5-8 mins @ 77°F, 50% RH
Pot Life (in mix vessel)	30 mins @ 77°F, 50% RH
Dry to Touch	6 hrs @ 77°F, 50% RH
Recoat	10 hrs @ 77°F, 50% RH
Light Foot Traffic Service	24 hrs @ 77°F, 50% RH
Full Cure & Max. Resistance	5 Days @ 77°F, 50% RH

APPLICATION

MIXING INSTRUCTIONS

Thoroughly mix each component prior to combining. Mix four (4) parts by volume of Part A (Resin) with one (1) part by volume of Part B (Hardener) for three minutes very thoroughly with a low speed electric drill and jiffy mixer. Do not add water or other solvent unless approved by **Key Resin Technical Service**.

Tinting Clear with Pigment Pack: Add Key UPP pigment pack AFTER first mixing Part A and Part B for a minimum of two minutes. After adding pigment, mix for additional one minute.

Key UPP Pigment Pack mix ratio: One (1) Pint UPP per one (1) gallon Key 446 Part A and 1/4 (0.25) gallon Part B.

Exception: White requires two (2) pints UPP per one (1) gallon Key 446 Part A and 1/4 (0.25) gallon Part B. for adequate hiding power.

INSTALLATION

KEY #446 is typically poured in ribbons, spread with a 5-7 mil Easy Squeegee and backrolled followed immediately by cross rolling in a single direction, or applied from a paint pan using dip & roll method. Use a 3/8" nap phenolic core roller at a spread rate of 300 ft² per gallon for squeegee application method or dip & roll method to achieve 2.25 mils dry film thickness. At the recommended thickness range bubbles may occur which will dissipate quickly, however do not apply thicker than 250 ft² per gallon or bubbles may form in the cured film. Keep a wet edge at all times to prevent knit lines. When pouring a ribbon of material, maintain a leading edge ribbon and pour new material into the ribbon. Roll-in time is maximum 5-8 minutes at 77°F, 50% RH. Care should be taken to minimize the entrapment of air caused by over-rolling. 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.

COMPOSITION

Waterborne acrylic resin/aliphatic polyisocyanate.

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TECHNICAL DATA

Mixing Ratio	4 Parts A:1 Part B by Volume
Solids Content	43% Solids by Volume
Volatile Organic Content (VOC) (EPA Method 24)	67 g/L, compliant to low VOC Rule 1113 in all 50 states
Viscosity @ 75°F 30 min.	600 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+ psi (Concrete Failure, varies by concrete strength)
Gloss, 60° - Clear		Gloss Finish
Abrasion Resistance	ASTM D4060 CS-17 Wheel, 1000 cycles	45 mg loss
Impact Strength (Direct)	ASTM D2794	160in./lbs.
Impact Strength (Reverse)	ASTM D2794	160in./lbs.
Chemical Resistance		Contact Key Resin Technical Service

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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