

KEY #451 URETHANE SEALER

Product Information Sheet



DESCRIPTION

KEY #451 is a two component, chemical resistant, aliphatic (non-yellowing) industrial maintenance polyurethane sealer. The high gloss finish offers excellent abrasion resistance, chemical and stain resistance, and superior color retention. **KEY #451** can be used equally well on vertical or horizontal surfaces. It is ideal for concrete floors and walls in warehouses, storage facilities, aircraft hangars, animal housing, vehicle maintenance facilities, and numerous other uses. **KEY #451** is available in both clear and pigmented formulations. **KEY #451** can be used as a finish coating option for most **Key Resin Systems**.

KEY ADVANTAGES

- Excellent chemical and stain resistance
- Excellent abrasion and mar resistance
- Suitable for both exterior/interior, horizontal/vertical use
- Excellent industrial maintenance coating
- Hot tire stain resistant

KEY CONSIDERATIONS

- Application rate must be no thicker than 350 ft² per gallon, thicker films will show bubbling in the cured film or have improper cure development
- Sensitive to air moisture during application/curing, air relative humidity should not exceed 85% RH
- VOC content is 100 g/L, compliant in all 50 states and SCAQMD as Industrial Maintenance Coating
- Substrate temperature must be a minimum of 50°F
- Substrate must be properly prepared and free of dirt, waxes, curing agents, and other foreign materials

COLOR SELECTION

KEY #451 is available in Clear and **Key Resin Standard Colors**. Gloss finish. Certain Key Standard Colors require minimum order quantity, refer to Key Resin Terms & Conditions of Sale. Clear may be tinted with **Key Urethane Pigment Packs** or **Universal Color Packs**.

COVERAGE

KEY #451 will yield approximately 2.5-3.0 mils dry when spread at 400-500 ft² per gallon. Coverage varies by type of system.

CURE/DRY TIME

Pot Life (in mix pail)	4 hours @ 75°F, 50% RH
Dry to Touch	8-10 hours @ 75°F, 50% RH
Recoat (min - max)	8 - 24 hours @ 75°F, 50% RH
Light Foot Traffic Service	24 hours @ 75°F, 50% RH
Wheeled Traffic Service	72 hours @ 75°F, 50% RH
Full Chemical Cure	5-7 days @ 75°F, 50% RH

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.

MIXING INSTRUCTIONS

Thoroughly mix each component prior to combining. Mix one (1) part by volume of Part A (Resin) with one (1) part by volume of Part B (Hardener) for three minutes very thoroughly with a medium speed electric drill and jiffy mixer. It is optional to add up to 10% **KEY SU-93** solvent thinner.

INSTALLATION

KEY #451 is typically spread with a squeegee and back-rolled, or applied from a paint pan using dip & roll method, or spray applied with an airless unit. Use a 1/4"-3/8" nap phenolic core roller at a spread rate of 400-500 ft² per gallon to achieve 2.5-3.0 mils dry film thickness. Thicker application may result in bubbling in the cured film or improper cure development. Keep a wet edge at all times. Use with adequate ventilation. Application in a small closed room requires negative air movement to remove solvent fumes and allow for proper curing. 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

Chemical resistant aliphatic polyurethane.

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TECHNICAL DATA

Viscosity	800-1000 cps
Mixing Ratio 2 gallon and 10 gallon units	1 Part A to 1 Part B by Volume
Solids Content, By Volume	77% (clear)
Volatile Organic Content (VOC) (EPA Method 24)	100 g/L Industrial Maintenance Coating
Weight	10.5 lbs / gallon, mixed

PHYSICAL PROPERTIES

Gloss, 60°- Clear	ASTM C794	Gloss Finish
Heat Resistance		140°F Continuous 200°F Intermittent
Impact Resistance	ASTM D2794	Direct, 160 in. lbs. Reverse, 160 in. lbs.
Sunlight Resistance		Non-yellowing
Abrasion Resistance	ASTM D4060 CS-17 Wheel, 1000 cycles	30 mg. loss, average

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.

MAINTENANCE

After completing the application of **KEY #451**, the installer should provide the owner with maintenance instructions. **KEY #451** is easily cleaned with neutral soaps or detergents. Refer to **Key Resin Technical Bulletin #3** and **#3A** for additional recommendations.

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.

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.

CHEMICAL RESISTANCE

REAGENT	RATING
Acetic Acid - 5%	L
Acetone	L
Betadine	R
Beer	R
Bleach - 10%*	L
Citric Acid - 30%	R
Citric Acid - 40%	L
Crude Oil	R
Diesel Fuel	R
Ethylene Glycohol	R
Fatty Acids	L
Gasoline	R
Hydrochloric Acid - 10%	R
Hydrochloric Acid - 37%	L
Iodine	R
JP-8 Jet Fuel	R
Lactic Acid - 15%	R
Methyl Ethyl Ketone	L
Motor Oil	R
Nitric Acid - 10%	R
Skydrol	R
Sodium Hydroxide - 50%	R
Spor-Klenz (Concentrate)*	L - 1 hour
Spor-Klenz (Diluted)	L - 8 hours
Sulfuric Acid - 20%	R
Toluene	R
Urea	R
Vinegar	L
Xylene	R

R - Recommended for continuous splash/spill service

L - Limited recommendation for 8 hours or less exposure time, requires more frequent cleanup, occasional spills only.

*May cause slight stain or discoloration