

KEY #470 POLYASPARTIC COATING

Product Data Sheet



DESCRIPTION

KEY #470 is a two component, ultra high solids, aliphatic polyaspartic polyurea designed to provide high gloss, UV light stable (non-yellowing), high temperature resistance and chemical resistant protection as a high performance industrial maintenance coating. **KEY #470** is a superior, new generation resin exhibiting fast cure time and excellent stain resistance. **KEY #470** has very low odor and can be applied indoors in occupied areas. **KEY #470** can be used as a clear or pigmented high gloss finish coating on various **Key Resin Systems**.

KEY ADVANTAGES

- Rapid cure time (recoat in 1-2 hours at 75°F)
- Excellent abrasion resistance
- Chemical and stain resistance
- Hot tire stain resistant
- Excellent UV light resistance
- Low odor for use in occupied areas
- Meets USDA requirements
- High temperature resistance to 300°F (dry heat)
- High gloss

KEY CONSIDERATIONS

- Substrate temperature must be a minimum of 35°F
- Substrate must be free of dirt, waxes, curing compounds, and other foreign materials
- Do not apply over damp or wet substrates
- 10-12 minute working time; relative humidity levels higher than 50% RH and warmer temps will further decrease working time, cooler temps and lower RH will increase working time and cure time
- May be thinned up to 10% with MEK, ethyl acetate, or Oxsol 100
- Only pre-tint material that will be used the same day; color will darken over time

COLOR SELECTION

KEY #470 is available in Clear only, and may be tinted on the jobsite using **Key Universal Color Packs (UNVCP)** or **Polyaspartic Color Packs (PCP)** available in **Key Resin Standard Colors** or approved custom colors with minimum quantity requirements and longer lead time. Note: Pigment packs will reduce working time. Pigment pack mix ratio: 1 pack/3 mixed gallons (all colors), light colors and Traffic Yellow/Red may require several coats for improved hiding.

COVERAGE

KEY #470 is typically spread at 125-250 ft²/gallon to yield 6-12 mils. Up to 16 mils is possible in one application but will exhibit a longer cure time to develop full hardness required for heavy traffic. Do not apply >16 mils.

CURE/DRY TIME

Working Life	10-12 minutes @ 75°F, 50% RH
Dry to Touch	1-2 hrs @ 75°F, 50% RH
Recoat (*Sanding required if exceeded)	1-2 hrs Minimum 8 hrs Maximum*
Light Foot Traffic (Wheeled carts / cleaning with liquids)	4-6 hrs @ 75°F 8-12 hrs @ 75°F
Heavy Traffic* (*Varies by thickness, type of traffic)	24-48 hrs @ 75°F

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 & INSTALLATION

Important: Review detailed mixing and installation instructions document prior to use. Specific application method depends on type of system installed. **Important Note:** It is common to find a white sediment in the bottom of the Part A container, this is a moisture scavenger additive. Premix Part A with a Jiffy mixer to re-suspend this sediment. Any sediment lumps that do not re-dissolve should be filtered with a paint filter. Alternatively, leave any sediment in the bottom of the Part A container that does not re-dissolve with premixing and pour off entire contents of Part A into a separate mixing vessel, leaving behind any thick residue that does not pour out with the resin.

Thoroughly mix Part A and Part B with a Jiffy (only) mixer with **sufficient speed to create a vortex** for a minimum of 2-3 minutes. After mixing, pour material into a paint pan and apply with a 1/4"-3/8" nap phenolic core roller, followed immediately with thorough cross-rolling. Alternatively pour material on floor in 8"-12" wide strips and spread with a flat trowel or flat/notched squeegee depending on thickness of application. Maintain a leading strip of material as the wet edge at all times and pour subsequent mixes into the leading strip of material. Typical application is 6-12 mils (125-250 ft²/gallon). Immediately backroll spread material gently with a 1/4"-3/8" nap roller. Do not over roll and entrap air. Total application time should take no longer than 10-12 minutes at 75°F, including roll-in time with subsequent batches. Maintain a wet edge. Up to 10% solvent (MEK, ethyl acetate, Oxsol 100) may be added at time of mixing to slightly lower viscosity.

Note: If pre-tinting part A use all tinted material the same day, otherwise color tone will darken over time.

Note: Application of **KEY #470** when air and/or substrate temperature is cooler than 70°F and air RH is lower than 50% will slow the cure time.

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

Two component, catalyzed polyaspartic polymer.

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TECHNICAL DATA

Viscosity @ 75°F	300-500 cps
Mixing Ratio	2 Parts A:1 Part B by Volume
Solids Content	90-92% Solids by Volume
Volatile Organic Content (VOC) (EPA Method 24)	118 g/L
Shelf Life	6 months, reduced working time may result with age

PHYSICAL PROPERTIES

Hardness, Shore D	ASTM D2240	24 hrs	25-30
		48 hrs	55-60
		4 days	70
Tensile Strength	ASTM D412	3,000-4,000 psi	
Elongation	ASTM D412	15% max	
Abrasion Resistance	ASTM D4060 CS-17 Wheel, 1000 cycles	40 mg	

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.

MAINTENANCE

After completing the application of **KEY #470**, the installer should provide the owner with maintenance instructions. **KEY #470** is easily cleaned with neutral soaps or detergents. Refer to **Key Resin Technical Bulletin #3** and **#3A** for additional recommendations.

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
Ammonia Hydroxide - 38%	R
Ammonium Hydroxide - 10% solution	R
Beer	R
Bleach	L*
Brake Fluid	R
Citric Acid - 5%	R
Citric Acid - 30%	R
Citric Acid - 40%	L
Coffee	R*
Cola Syrup	R*
Crude Oil	R
Diesel Fuel	R
EEP Solvent	L
Ethanol	L
Ethylene Glycol	R
Fatty Acids	L
Gasoline	R
Hydrochloric Acid - 15%	R
Hydrogen Peroxide - 30%	L
Iodine	L*
Jet Fuel	R
Lactic Acid - 15%	R
Lactic Acid - 50%	L
Methyl Ethyl Ketone	L
Mineral Oil	R
Nitric Acid - 10%	R
Orange Juice	R
Phosphoric Acid - 85%	L
Skydrol	R
Sodium Hydroxide - 5% solution	R
Sodium Hydroxide - 50%	R
Sulfuric Acid - 20%	R
Toluene	L
Tri-Sodium Phosphate	R
Urea - 6.6% solution	R
Urine	R

R - Recommended for splash/spill service with daily cleanup.
L - Limited recommendation for 8 hours or less exposure time, requires more frequent cleanup, occasional spills only.
*Note: Bleach, iodine or acids allowed to evaporate/concentrate repeatedly will cause stains.

Refer to Key Resin Chemical Resistance Guide for further information

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