

# KEMKO<sup>®</sup> 141 QuikPrime

Primer for  
damp or wet substrates  
or green concrete

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| <b>Type:</b>         | Two-component, solvent-free, low viscosity epoxy.   |
| <b>Primary Use:</b>  | Prime coating substrates where vapor drive, moisture, low temperature or green concrete prevent proper bonding of coatings or grouts. |
| <b>Substrates:</b>   | Concrete, steel, wood, FRP. Dry, damp and wet surfaces.   |
| <b>Minimum Temp:</b> | Installation: 35° F   |
| <b>Thickness:</b>    | Single coat @ 8 - 10 mils (typical).  |
| <b>Coverage:</b>     | 160 - 200 sq ft/gal @ 8 - 10 mils.  |
| <b>Colors:</b>       | Clear amber   |
| <b>Shelf Life:</b>   | Three year minimum in sealed containers.  |

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*The properties listed in this bulletin are typical and descriptive of the product and should not be used for specification purposes. For specification preparation, reference the specification of this product available from ChemCo Systems, Inc. This product is available only through KIP System™ (KEMKO Injection Process) licensee/applicators.*

**Description:** KEMKO 141 QuikPrime is a two-component, solvent-free epoxy primer designed for primer coating dry, damp and wet substrates in preparation for installation of a wide variety of urethane, polyurea and epoxy products. Typical applications include the prime coating of concrete and steel substrates in rebuilding damaged joint nosing, repairing spalled and deteriorated concrete and sealing non-structural cracks in concrete. Kemko 141 can also be used as a primecoat in green concrete provided that the substrate can tolerate a vapor barrier early in its cure cycle. The product's short cure cycle, tolerance of surface dampness, low viscosity, excellent cold weather performance and high bond strength to prepared surfaces make it ideally suited as a multipurpose primer. Determination of the bond strength of KEMKO 141 + topcoat to the prepared substrate particularly under low temperature, damp conditions prior to installation is recommended.

**Features:** KEMKO 141 QuikPrime is specifically formulated to bond urethanes, polyureas and epoxies to dry, damp and wet construction substrates. Prime coating substrates with KEMKO 141 significantly improves the bond strength of the subsequently applied coatings or grouts, particularly to damp substrates. The product has a convenient 2:1 (by vol.) mixing ratio and a fast cure cycle for short downtimes. The components do not contain volatile solvents (VOC's).

**Limitations:** KEMKO 141 QuikPrime must be allowed to a set but still tacky condition before application of topcoat. Excess water films on surfaces should be removed prior to application of KEMKO 141. The minimum substrate temperature for cure is 35 °F. Note that cure times at very cold temperatures will be significantly longer. Caution should be exercised on green concrete, Kemko 141 should be applied no sooner than 24 hours after placement (test evaluation is strongly suggested). Concrete substrate must be able to tolerate a vapor barrier. Apply the material after the daily substrate temperature cycle has reached its peak. Do not add solvents or otherwise thin this material.

**Packaging:** Standard package sizes of Part A + Part B are 3, 15 and 150 gallon units.

**Shelf Life:** Three years minimum in unopened, original containers when stored between 60 and 90 °F in a dry place away from sunlight. Remixing of components may be required upon prolonged storage.

**Chemical Resistance:** Resistant to a wide range of commonly used deicing and vehicular chemicals. It has limited resistance to hydrocarbon solvents. Performance is a function of the specific chemical and concentration, ambient and solution temperatures, exposure times and housekeeping procedures. For information on specific chemicals and exposure conditions, contact a ChemCo Systems, Inc., technical representative.

**Color Selection:** The standard color is clear amber. Custom colors are available and may require minimum quantities and/or slightly higher cost.

**Surface Preparation:** Substrate surfaces must be sound and free of all bond-inhibiting substances. Wet surfaces should be force air blown to remove excess water prior to application of KEMKO 141 QuikPrime. Prepare surfaces for bonding in accordance with ASTM D 4259, 'Standard Practice for Abrading Concrete,' or ACI 503R, Chapter 5, 'Preparing Surfaces for Epoxy Compound Application,' and ChemCo Systems, Inc.'s specific recommendations. Properly prepared concrete surfaces should have a minimum strength of 250 psi in direct tension. Steel surfaces should be cleaned to white metal according to SSPC SP 5.

**Mixing:** KEMKO 141 QuikPrime is a two-component adhesive. The resin to hardener (Part A: Part B) mix ratio is 2:1, by volume. Premix the individual components before drawing from bulk packaging. Wear safety glasses and clean neoprene rubber gloves when handling the material. Transfer the appropriate quantities of Part A and Part B into a mixing container. Mix thoroughly using a Jiffy mixer blade attached to a low speed (350 - 750 rpm) electric or pneumatic drill. Proper mixing will take 2 - 3 minutes. Pour the mixed primer onto the substrate or into shallow tray (extends work life by reducing the build-up of (exothermic heat).

**Installing:** Prime the substrate with mixed KEMKO 141 QuikPrime. The recommended primer thickness is 8 - 10 mils (160 - 200 sq ft/gal). Apply the top coat material (neat binder, mortar, concrete or flowable grout) to the primed substrate after the primer is set but still tacky (approx. 4 - 5 hr @ 50 deg F, 1 - 1.5 hr @ 75 °F and 45 minutes to 1 hr @ 90 °F). Clean application tools frequently.

**Clean up:** All tools and equipment must be cleaned before the mixed material cures. Cleaning can be facilitated with a solvent such as acetone or heavy-duty detergents. Cured material may be removed from equipment and tools by soaking in an epoxy stripper.



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## Typical Properties (1)

| Property   | Test Method | Value                            |
|--|-------------|----------------------------------|
| Mix Ratio, A:B,  | by vol      | 2 : 1                            |
|  | by wt       | 100:44                           |
| Color:   | Part A      | VISUAL                           |
|  | Part B      | Clear amber                      |
|  | Mixed       | Clear amber                      |
| Weight per Gallon, lb:   | Part A      | ASTM D 1475                      |
|  | Part B      | 9.5                              |
|  | Mixed       | 8.3                              |
| Viscosity, cp:   | Part A      | ASTM D 2393                      |
|  | Part B      | 300                              |
|  | Mixed       | 150                              |
| Gel Time, 100 g, minutes   | ASTM D 2471 | 250                              |
| Primer Cure Time, minimum, hours (2)   | ASTM D 4541 | @50°F                            |
|  |             | 73°F                             |
|  |             | 90°F                             |
|  |             | 4.0 1.5 0.75                     |
| Tensile Strength, psi  | ASTM D 638  | 10200                            |
| Elongation at Break, %   | ASTM D 638  | 2.0                              |
| Bond Strength of KEMKO 132<br>to KEMKO 141 Prime Coated,<br>ASTM C 109 Cement Mortar, psi: | ASTM D 4541 |                                  |
|  |             | dry                              |
|  |             | damp                             |
|  |             | Cement mortar failure<br>300 (3) |

- (1) Cure schedule, 7 clays at 73° ± 4° F and test temperature, 73° ± 4° F.  
 (2) Minimum primer cure time before application of KEMKO 132, Polyurea Binder.  
 (3) Primer coat cure schedule, 1.75 hr @ 73° ± 4° F before application of KEMKO 132 Polyurea Binder;  
 Compressive strength of cement mortar, 4500 psi.

**Handling and Toxicity:** This bulletin does not accompany the product when sold. For hazard warnings, safe handling and first aid instructions, **CAREFULLY READ THE MATERIAL SAFETY DATA SHEETS AND CONTAINER WARNING LABELS.**

**Part A:** Liquid epoxy resin, HMIS Health Hazard Rating- 2 (Moderate Hazard). Warning! Causes eye and skin irritation. May cause allergic skin reaction, Harmful if swallowed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid prolonged or repeated contact with skin.

**Part B:** Liquid epoxy hardener, HMIS Health Hazard Rating- 3 (Serious Hazard). Contains alkaline amines. Danger! Causes severe eye and skin burns. May cause allergic skin and respiratory reaction, Combustible, corrosive. Do not get in eyes or skin or on clothing. Avoid breathing vapor, Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Keep away from heat and open flame.

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