

KEMKO® 141 Primer

Primer for
Polyurea Binder

Type:	Two-component, solvent-free, epoxy resin / hardener.
Primary Use:	Prime coating substrates in preparation for installation of KEMKO 132, Polyurea Binder.
Substrates:	Concrete and steel. Dry and damp surfaces.
Minimum Temp:	Installation: 50° F, Cure: 40° F (substrate temperature).
Thickness:	Single coat @ 8 - 10 mils (typical).
Coverage:	160 - 200 sq ft/gal @ 8 - 10 mils.
Colors:	Clear amber
Shelf Life:	One-year minimum in sealed containers (see below for conditions).

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 Primer is a two-component, solvent-free epoxy primer designed for primer coating dry and damp substrates in preparation for installation of KEMKO 132, Polyurea Binder. 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. The product's short cure cycle, tolerances of surface dampness and high bond strength to prepared surfaces make it ideally suited as a substrate primer for KEMKO 132, Polyurea Binder. Determination of the bond strength of KEMKO 141 Primer + KEMKO 132, Polyurea Binder system to the prepared substrate particularly under low temperature, damp conditions prior to installation is recommended.

Features: KEMKO 141 Primer is specifically formulated to bond KEMKO 132, Polyurea Binder to dry and damp construction substrates. Prime coating substrates with KEMKO 141 Primer significantly improves the bond strength of the subsequently applied KEMKO 132, Polyurea Binder, 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: Primer coat of KEMKO 141 Primer must be allowed to a set but still tacky condition before application of KEMKO 132, Polyurea Binder. Substrate surfaces may be dry or damp; wet surfaces must be dried to at least a damp condition prior to application of KEMKO 141 Primer. The recommended minimum substrate temperature during application is, 50 deg F. The minimum substrate temperature for cure is 40 deg F. 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 deg 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 may be dry or damp but must be sound and free of all bond-inhibiting substances. Wet surfaces must be dried with artificial heat to at least a damp condition prior to application of KEMKO 141 Primer. 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 Primer 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 Primer. The recommended primer thickness is 8 - 10 mils (160 - 200 sq ft/gal). Apply the KEMKO 132; Polyurea Binder (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 deg F and 45 minutes to 1 hr @ 90 deg 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.



ChemCo Systems, Inc.
2800 Bay Road
Redwood City, CA 94063
Ph 650-261-3790 Fax 650-261-3799
www.chemcosystems.com

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	8000
Elongation at Break, %	ASTM D 638	2.0
Bond Strength of KEMKO 132 to KEMKO 141 Prime Coated, ASTM C 109 Cement Mortar, psi:	ASTM D 4541	
		dry
		damp
		Cement mortar failure
		300 (3)

(1) Cure schedule, 7 days 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.

READ CAREFULLY 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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