KEMKO®141 QuikPrime™

COATING – STRUCTURAL EPOXY ADHESIVE PRIMER FOR POLYMER COATING & FLOORING SYSTEMS

TECHNICAL DATA SHEET

PRODUCT IS ONLY AVAILABLE TO KEMKO® APPLICATORS IN U.S., CANADA, AND INTERNATIONAL CUSTOMERS

KEMKO® 141 QuikPrime™ is a 2:1 mix ratio, two-component, solvent-free, low viscosity, structural epoxy adhesive primer designed to prime properly prepared concrete or steel. It is one of the few primers that meets ASTM C881, Type 1, Class B and Class C. It can be applied over fresh concrete (24 hours after placement 73°F (23°C), hardened concrete, and steel. It is an ideal primer for polymer products requiring a primer, such as, epoxies, polyaspartics, polyureas, and polyurethanes. It can be applied over properly prepared concrete substates that are dry, damp, wet, and free of standing water. Applications include priming properly prepared concrete and steel substrates when rebuilding damaged joint nosing, repairing spalled and deteriorated concrete, and sealing non-structural cracks in concrete. KEMKO® 141 can also be used as a prime coat in green concrete provided that the substrate can tolerate a negative side vapor barrier early in its cure cycle. The product's short cure cycle, tolerance of surface dampness, low viscosity, excellent adhesion in cold weather, and high bond strength to properly prepared surfaces make it ideally suited as a multipurpose primer. It contains no VOC's (volatile organic compounds).

- Meets - ASTM C881, Type I, II, IV and V, Grade 2, Class B and C and AASTHO M235, Type I, II, IV and V, Grade 2, Class B and C.

FEATURES

KEMKO® 141 QuikPrime™ is specifically formulated as a primer for bonding epoxies, polyaspartics, polyureas, and polyurethanes to dry, damp, and wet and concrete substrates that are free of standing water, and steel substrates.

- Bonds to dry and damp substrates.
- High chemical resistance.
- Environmentally safe no VOC's.

TYPICAL USES

- A structural epoxy adhesive primer.
- Applied at temperatures as low as 35°F (1.7°C).
- Priming the substrates significantly improves the bond strength of the subsequently applied coatings, flooring, semi-rigid, and elastomeric control joint sealers and grouts, particularly to damp substrates.
- Can be placed as a primer over plastic (fresh) concrete 24 hours after placement.
- Is a convenient 2:1 (by vol.) mixing ratio
- A fast cure cycle for short downtimes.

COVERAGE RATE

Primer: Coverage 160 – 200 sq. ft. (14.9 – 18.6 sq. m.). ICRI – Guideline CSP 2 – 4. For more aggressive textures coverage may vary.

LIMITATIONS

The recommended minimum substrate temperature during installation and for cure is 35°F (2°C) and above.

- The maximum in-service temperature should be 20°F (10°C) below the HDT (Heat Deflection Temperature) in bonding structural applications subjected to substantial and sustained shear stresses that may cause creep.

TECHNICAL DATA

7 days 73°F (23°C) unless otherwise indicated. Compressive strength of cement mortar 4,500 psi (13.0 MPa).

PHYSICAL PROPERTIES		TEST METHOD	VALUE
Mix Ratio by Volume			2:1
Mix Ratio by Weight			100:44
Color		Visual	Clear Amber
Weight per Gallon	**Part A** **Part B** **Mixed**	ASTM D1475	9.5 lbs. (5.2 kg) 8.3 lbs. (4.4 kg) 9.1 lbs. (4.9 kg)
Viscosity, CP	**Part A** **Part B** **Mixed**	ASTM D2393	300 150 250
Gel Time, 100 grams		ASTM D2471	15 Minutes
Primer Cure Time	**50°F (10°C)** **73°F (23°C)** **90°F (32°C)**	ASTM D7234	4 Hours 1.5 Hours 0.75 Hour
Tensile Strength		ASTM D638	10,200 psi (70 MPa)
Tensile Elongation		ASTM D638	2%
Bond Pull-Off Strength to Concrete		ASTM D7234	300 psi (2.1 MPa)
Hardness, Shore D		ASTM D2240	62
Heat Deflection Temperature		ASTM D648	135°F (57°C)

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- When bonding plastic (fresh) concrete containing resinous admixtures, establish the suitability of the concrete mix before actual use.
- Do not add solvents or otherwise thin this product. Admixtures establish the suitability of the concrete mix before actual use.

PACKAGING

Standard kit sizes of Part A + Part B: 3,15, and 150 Gallon (11.36, 56.78 and 567.8 l.) kits. Available in cartridges.

SHELF LIFE AND SHIPPING

Three years minimum in unopened, original containers when stored between 50°F (10°C) and 90°F (32°C) in a dry place away from direct sunlight. Remixing of each component may be required upon prolonged storage.

COLOR SELECTION

Clear amber.

CHEMICAL RESISTANCE

KEMKO® 141 QuikPrime™ has excellent resistance to a wide range of commonly encountered chemicals including acids and bases, aircraft and automotive fluids, petroleum fuels, cutting oils, etc. 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' technical representative.

SURFACE PREPARATION

Substrate surfaces must be dry or damp, sound and free of all bond- inhibiting substances. Prepare surfaces in accordance with International Concrete Repair Institute, ICRI Guideline No. 310.215.6R Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair, Concrete Surface Profile, CSP 2 to CSP 4. The concrete surfaces should have a minimum strength of 250 psi (1.72 MPa) in direct tension per ASTM C1583 Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method). Steel surfaces should be cleaned to "white metal" according to SSPC-SP 5/NACE No. 1 White Metal Blast Cleaning is a standard used for white metal blast cleaning put forth by the SSPC (Society for Protective Coatings) and NACE (National Association of Chemical Engineers) international standard.

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. Use quantities that can be applied before the pot life of the material expires. Blend 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.

INSTALLING

Pour mixed material onto the prepared substrate and spread to the specified coverage with a V-notch trowel, squeegee, or paint roller. For large areas, spray application of the material is recommended. When mating two solid surfaces, apply a bonding agent to both surfaces. Allow all coated substrate surfaces to rest for 5-10 minutes before pouring fresh concrete or mating with another surface. In plastic to hardened concrete bonding applications, the bond line should be at least 15 mils. Lightweight concrete may require a second coat of epoxy adhesive. In other bonding applications, bond line thickness is less critical but should be at least 4 mils above the peaks of the surface profile. For additional application information, see ACI 503R, Chapter 7, Applying Epoxy Compounds.

RECOAT WINDOW

The recoat window is 24 hours when the substrate and ambient temperature are 75°F (24°C).

- Higher temperatures will shorten the recoat window and lower temperatures will lengthen the recoat window.
- During the interim between placement and recoating, job site conditions may result in contamination of the original surface, therefore acetone solvent wipe may be required.
- For heavier contamination, light screening or light sanding followed by removal of residue by vacuuming or acetone wipe (or both) may be required to remove the contamination
- The minimum time to recoat a 100% solid coating is when the product to be recoated is tack free.
- The recoat temperature is between 40°F (4°C) and 100°F (38°C).
- Consult a ChemCo Systems' Technical Representative for additional information.

AGGREGATE EXTENSION

One gallon of neat KEMKO® 141 yields 231 cubic inches, which can be extended with uniform sized sand that has been washed, kiln dried, and bagged.

- Add up to two gallons of aggregate to one gallon of epoxy for a pourable aggregate extension, which yields approximately 500 cubic inches. Use 20 – 60 US Sieve Mesh, aggregate should be round or tending toward round for best flowability.
- For troweling or patching use a flooring mortar tri-blended, with the larger aggregate being angular in shape.
- Boadcast 100 US Sieve Mesh aggregate that has been washed, dried, and bagged on patches or mortar repairs, to minimize tracking of uncured material if accidently stepped on.

Note: ChemCo Systems can recommend pre-coated aggregate when it is required for safety reasons.

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SAFETY

This bulletin does not accompany the product when sold. For hazard warnings, safe handling, and first aid instructions, CAREFULLY READ THE 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 an 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, Warning! Causes eye and skin irritation, 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. Keep away from heat and open flame.

CLEAN-UP / DISPOSAL

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.

TECHNICAL SUPPORT

Additional information, technical assistance, and management services are also available from a ChemCo Systems' Technical Consultant at sales@chemcosystems.com or 650-261-3790.

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. This product is available only through KIP™ System (KEMKO® Injection Process) applicators.

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