

Long potlife coating resists common chemicals. Can be used for contact with dry bulk and aqueous foods.

# KEMKO<sup>®</sup> 234 FC Coat

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<b>Type:</b>	Two-component, solvent-free, epoxy resin / hardener.
<b>Primary Use:</b>	Chemical resistant coating; chemical, abrasion and slip resistant surfacing. Complies with FDA 21 CFR 175.300 for dry bulk and aqueous food contact when properly cured.
<b>Substrates:</b>	Concrete, masonry, stone, steel, wood and FRP.
<b>Minimum Temp:</b>	Installation: 50° F (substrate temperature).
<b>Thickness:</b>	Coating, two coats minimum @ 10 mils per coat. Surfacing, single or multiple coats @ 20-30 mils per coat
<b>Finish:</b>	Smooth, tile-like or variable texture with aggregate broadcast.
<b>Colors:</b>	Concrete gray. Also available in brick red, tan, white or black.
<b>Coverage:</b>	Coating, 100 - 133 sq ft / gal (two coats); Surfacing, 50 - 80 sq ft / gal.
<b>Shelf Life:</b>	Three years minimum in sealed containers (see below for conditions).

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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 System's, Inc. This product is available only through KIP System™ (KEMKO® Injection Process) licensee/applicators.*

**Description:** KEMKO® 234, FC Coat is a two-component, rigid, epoxy coating with excellent resistance to mild acids and bases, industrial chemicals and automotive fluids (fuels, lubricants, hydraulic fluids). When seeded or blended with aggregate, it can be used on properly prepared concrete, masonry, steel or wood surfaces to provide a pedestrian or vehicular traffic surface with excellent chemical, wear and slip/skid resistance characteristics.

**Features:** Unlike many other coatings, KEMKO 234 will bond to properly prepared, wet (no free standing water) substrates and cures to a tough, blush-free, tile-like surface. Kemko 234 offers a long useful potlife and the product is not regulated as corrosive for transport. In outdoor use, the coating is freeze-thaw resistant and will not embrittle but will acquire a chalky surface when exposed to sunlight. KEMKO 234 is a 100% solids product and does not contain volatile organic solvents (VOC's). It has a convenient 2:1 (by vol.) mixing ratio and can be applied by brush, roller or with two-component spray equipment.

**Limitations:** The recommended minimum substrate temperature during application is 50 °F. Apply the material after the daily substrate temperature cycle has reached its peak. Substrates on or below grade must have a functioning vapor barrier to minimize the potential for blistering or delaminating of the applied coating. Galvanized steel and aluminum are difficult substrates to coat and require special surface preparation. 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 long-term storage.

**Chemical Resistance:** KEMKO 234 provides excellent resistance to salt and fresh water, detergent and salt solutions, alcoholic and carbonated beverages, gasoline, kerosene, crude, fuel and mineral oil, most alkalis and weak acids, trichlor, heavy-duty brake fluid, Skydrol and many other chemicals. Exposure to strong acids, hot water (above 180°F), bleaches and other highly corrosive chemicals should be occasional and time limited. Resistance under these conditions should be determined by actual test before the product is applied. KEMKO 234 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 concrete gray. Custom colors may be available and may require minimum quantities and/or slightly higher cost.

**Surface Preparation:** Concrete surfaces may be dry, damp or wet (no free standing water) but must be sound and free of all bond-inhibiting substances and laitance. Prepare surfaces for coating 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 and a light surface profile of CSP2-3 (ICRI). Steel surfaces should be cleaned to 'white metal' according to SSPC SP 5.

**Mixing:** KEMKO 234 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 potlife of the mixed 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:** Apply with a stiff bristle brush, short nap roller, squeegee or two-component spray equipment. When used as a coating, apply in two or more 10 mil coats rather than one thick coat. For best chemical resistance, 3 coats of 10 mils each are recommended. Subsequent coats may be applied as soon as the previous coat is tack-free. When used as a surfacing, pour mixed material onto the substrate and spread to the desired coverage with a V-notch trowel or squeegee. Allow the coating to become tacky to tack-free (4 - 7 hr @ 70° F) before applying the next coat. Avoid excessive cure times between coats. Aggregate, if used, must be dry (contain no more than .2% water by wt.) and be broadcast onto the KEMKO 234 within 15 minutes of applying the coating. The recommended aggregate size is #20x40 or #30x50 mesh. Typical broadcast rates are .75 - 1.5-lb/sq ft. For additional application information, see ACI 503R, Chapter 7, "Applying Epoxy Compounds."



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## Typical Properties (1)

Property	Test Method	Value
Mix Ratio, A:B,	by vol by wt	2:1 100:36
Color:	Part A Part B Mixed	White Black Gray
Weight per Gallon, lb:	Part A Part B Mixed	12.1 8.0 10.7
Viscosity, cP:	Part A Part B Mixed	2280 275 1600
Gel Time, 100 gm, minutes	ASTM D 2471	120
Thin Film Set Time, hours	ASTM D 1640	4.5
Recoat Time, hours:	@ 60° F @ 73° F @ 90° F	8-72 4-36 2-18
Tensile Strength, psi	ASTM D 638	6000
Elongation at Break, %	ASTM D 638	5
Compressive Yield Strength, psi	ASTM D 695	10000
Compressive Modulus, psi	ASTM D 695	350,000
Heat Deflection Temp, deg F	ASTM D 648	120
Hardness, Shore D	ASTM D 2240	83
Taber Abraser, mg loss	ASTM D 4060	91 (2)

(1) Cure schedule, 7 days at 73° ± 4° F and test temperature, 73° ± 4° F unless otherwise indicated.

(2) CS-17 wheels, 1000 g load, 1000 cycles.

**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.

**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 - 2 (Moderate Hazard). Contains alkaline amines, Warning! Causes eye and skin irritation, May cause allergic skin and respiratory reaction, 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.

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