KEMKO® A-1 Asphalt Coat

Chemical Resistant Asphalt Pavement Coating/Surfacing

Type:	Two-component, solvent-free, epoxy resin / hardener.
Primary Use:	Impact, abrasion and chemical resistant coating I surfacing of asphalt pavement.
Substrates:	New and old asphalt concrete. Dry surfaces only.
Minimum Temp:	Installation: 50° F, Cure: 50° F (substrate temperature).
Thickness:	Two coats to a total film thickness of 40 mils minimum.
Finish:	Smooth or variable texture with aggregate broadcast.
Colors:	Black and concrete gray (blue-gray).
Coverage:	.025 gal / sq ft; 40 sq ft / gal.
Waterproofing:	Two coats required; material has limited crack-bridging capability.
Shelf Life:	Three years 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® A - 1, Asphalt Coat is a two-component, low viscosity, epoxy coating with excellent resistance to jet fuel, aircraft hydraulic fluids (Skydrol) and automotive chemicals. When seeded or blended with aggregate, it can be used on properly prepared asphalt pavements to provide a traffic surface with high chemical, skid and wear resistance.

***Applications*:** Service areas of aircraft parking aprons, aprons around gasoline pumps in filling stations, ramps, walkways, loading bays and asphalt industrial floors.

***Features*:** Unlike many other protective coatings with aircraft and automotive chemical resistance, KEMKO A - 1 does not embrittle when exposed to sunlight for long periods of time and is environmentally safe. It has a convenient 1:1 (by vol.) mixing ratio and is formulated for low "self-leveling" viscosity without the use of volatile solvents (VOC's).

***Limitations*:** Substrates must be dry. The minimum substrate temperature during application and initial cure period (24 - 48 hr) is 50 deg F. Apply the material after the daily substrate temperature cycle has reached its peak. Before applying, make sure the pavement is not subject to hydrostatic pressure that can cause blistering or delaminating of the coating. Environmental exposure may cause color changes- black becoming lighter; gray turning sand color. The material has limited crack-bridging capabilities. Do not add solvents or otherwise dilute this material.

***Packaging*:** Standard package sizes of Part A + Part B are 2, 10 and 100 gallons.

***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 long-term storage.

***Chemical Resistance*:** Resistant to a wide range of commonly used aircraft and automotive chemicals including jet fuels, gasoline, hydraulic fluids, anti-freeze and battery acid. Ongoing exposure to Gasohol and heavy-duty brake fluid (polyether glycol based lubricants) is not recommended. 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*:** Standard colors are black and concrete gray (blue-gray). Custom colors are available and may require minimum quantities and/or slightly higher cost.

***Surface Preparation*:** Substrate surfaces must be dry, sound and free of all bond-inhibiting substances. Prepare asphalt pavements by scrubbing with a 2% solution of non-ionic detergent followed by high pressure water rinsing until the surface no longer feels slippery to the touch. A combination of detergent wash and mechanical cleaning should be employed in areas where an excessively heavy cake of oil and grime has been deposited. Properly prepared asphalt surfaces should have a minimum strength of 100 psi at 73° ± 4° F in direct tension.

***Mixing*:** KEMKO A - 1 is a two-component system. The resin to hardener (Part A: Part B) mix ratio is 1:1, 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*:** Protecting the asphalt substrate from Intrusion of chemicals requires the application of two coats minimum. Pour the mixed material onto the substrate and spread to a coverage of 105 sq ft/gal (approx. 15 mils) with a 3/8" nap paint roller or squeegee. Allow the coating to become tacky to tack-free (4 - 7 hr @ 70° F) before applying the second coat. Apply the second coat and spread to a coverage of 64 sq ft/gal (approx. 25 mils) with a V-notch trowel or squeegee. Allow the material to level and back roll with a 3/8" nap paint roller. Avoid excessive cure times between coats. Aggregate, if used, is broadcast onto the second coat of KEMKO A - 1. The recommended aggregate size is #20x40 or #30x50 mesh. Typical broadcast rates are .75 - 1.5-lb/sq ft. Broadcast aggregate within 15 minutes of applying the second coat. For vehicular surfaces, use of polish resistant aggregate, e.g., aluminum oxide, silicon carbide, blast furnace slag, trap rock, etc., is recommended for maintenance of long-term skid resistance. Allow overnight cure (12 - 16 hours) before opening to traffic. At pavement temperatures below 60 F, heavy traffic use should be limited for another 8 hours. For most applications, cure sufficient for traffic exposure has been obtained when the binder resists indentation by a thumbnail and aggregate cannot be dislodged with thumb pressure.

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Typical Properties (1)

	Property	Test Method	Value
Mix Ratio, A:B,	by vol		1: 1
	by wt		100: 94
Color:	Part A	VISUAL	Opaque amber
	Part B		Black or concrete blue-gray
	Mixed		Black or concrete blue-gray
Weight per Gallon, lb:	Part A	ASTM D 1475	9.3
	Part B		8.8
	Mixed		9.1
Viscosity, cp:	Part A	ASTM D 2393	1000
	Part B		2500
	Mixed		1600
Gel Time, 200 g, minutes		ASTM D 2471	30
Tensile Strength, psi		ASTM D 638	2000
Elongation at Break, %		ASTM D 638	40
Taber Abraser, mg loss		ASTM D 4060	168 (2)

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

(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.

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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