

KEMKO® 186 Epoxy Healer/Sealer

Type:	Two-component, solvent-free, epoxy resin / hardener.
Primary Use:	Gravity filling of fine cracks, consolidation of fine cracks, strengthening of weak and porous surface layers, Coatings primer.
Substrates:	Concrete, polyester concrete.
Minimum Temp:	Installation: 40° F; Cure: 40° F (substrate temperatures).
Thickness:	Single flood coats @ 15-25 mils per coat.
Finish:	Smooth or variable texture with aggregate broadcast.
Colors:	Very Light Amber.
Coverage:	As a flood coat, 80-125 sq ft / gal.
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® 186 Epoxy Healer/Sealer is a two-component, very fast curing, low viscosity epoxy coating with resistance to most oils, greases and road salts. It is designed for topical application on porous and/or cracked concrete including bridge decks, loading docks and high use industrial floors. KEMKO 186 provides a high degree of surface wetting for excellent penetration into cracks as fine as 2 mils and voids of stressed or worn substrates. It also functions as an excellent fast-set primer for helping bond either rigid or elastomeric coatings over distressed substrates.

Features: KEMKO 186 Epoxy Healer/Sealer exhibits excellent resistance to water, aqueous salt solutions and motor fuels, does not embrittle when exposed to sunlight for long periods of time and is environmentally safe. It has a convenient 4:1 (by vol.) mixing ratio and is formulated for single coat applications. It contains no volatile solvents (VET's). The fast cure minimizes downtime and traffic disruption. Compared to high molecular weight methacrylates, KEMKO 186 Epoxy Healer/Sealer has a much higher flash point and lower odor, is less brittle the cured polymer has greater strength than HMWM. It is not subject to UV "inhibition of cure" as sometimes affects HMWM materials and can be used on polyester based polymer concrete overlays.

Limitations: Substrates must be dry. The minimum substrate temperatures during application and initial cure period is 40 F Apply the material after the daily substrate temperature cycle has reached its peak.

Packaging: Standard package sizes of Part A + Part B are 5 and 50 gallon units.

Shelf Life: Three years minimum in unopened, original containers when stored at room temperature in a dry place away from sunlight. Remixing of components may be required upon prolonged storage.

Chemical Resistance: KEMKO 186 is resistant to a wide range of commonly used aircraft and automotive chemicals including jet fuels, gasoline, selected hydraulic fluids, anti-freeze battery acid and most alkalizes. Performance is a function of the specific chemical and concentration, ambient and solution temperatures, residence times and housekeeping procedures. For information on specific chemicals and exposure conditions, contact a ChemCo Systems, Inc.

Surface Preparation: Substrate surfaces must be dry, sound and free of all bond-inhibiting substances. Prepare surfaces in accordance with industry standards and manufacturer's specific recommendations. Cleaned 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 186 Epoxy Healer/Sealer is a two-component system. The resin to hardener (Part A: Part B) mix ratio is 4:1, 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.

Caution - Take care to not leave the mixed material in the bulk mixing container. After mixing, immediately pour contents onto working surface. Due to the short gel time of this product rapid exotherm of the bulk material will otherwise occur. Spread onto the substrate, the product's fast viscosity gain, due to gelation; will be reduced.

Installation: Pour the mixed material onto the substrate and distribute with a squeegee to a coverage rate of 80 - 125 ft/gal. Let the material penetrate for 10 - 20 minutes and then redistribute the excess with squeegees or a broom leaving the minimum amount of material possible on the surface. Repeat the process if the product is rapidly absorbed. Wait an additional 10 - 20 minutes, then broadcast dry, #20 mesh sand at a rate of 2 lb/yd. Remove excess sand by vacuum or sweeper prior to opening to traffic. Do not open to traffic until the treated surface is tack-free (non-oily) and sand adheres sufficiently to resist brushing by hand. If used as a primer for an elastomeric or non-flexible topcoat, apply the topcoat within the time that tack is decreasing but before it is lost (1 - 3 hours after spreading depending on substrate temperature).

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 by soaking in an epoxy stripper.



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Typical Properties (1)

Property		Test Method	Value
Mix Ratio, A:B,	by vol		4 : 1
	by wt		100 : 23.4
Color:	Part A	VISUAL	Clear
	Part B		Lt. Amber
	Mixed		Lt. Amber
Weight per Gallon, lb:	Part A	ASTM D 1475	9.5
	Part B		8.7
	Mixed		9.4
Viscosity, cps:	Part A	ASTM D 2393	93
	Part B		11
	Mixed		75
Gel Time, 60 g, minutes		ASTM D 2393	13
Thin film tack free time, hrs		ASTM D 1640	5.5-6.5
Thin film Set (50 mil, touch dry)		ChemCo	5.5
Compressive Yield, psi		ASTM D 695	14,990
Tensile Strength, psi		ASTM D 638	7800
Elongation at Break, %		ASTM D 638	4.5
Hardness, Shore D		ASTM D 2240	74, 83 (1,3 days)

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

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 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. Combustible liquid, 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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