

# KEMKO® 022 SuperSEAL™ PASTE

INJECTION SEAL - EXTREMELY SHORT WORKING TIME FOR  
SEALING OF CRACKS PRIOR TO INJECTION

## TECHNICAL DATA SHEET

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

KEMKO® 022 SuperSEAL™ is a two-component, non-sag, epoxy paste adhesive bonder designed for sealing cracks and delaminations in concrete, masonry, stone, steel, and wood in preparation for repair with the KIP™ (KEMKO® Injection Process) System automatic meter, mix, and dispense application equipment. It is ideally suited for surface sealing in cool and cold substrate and environments. KEMKO® 022 bonds to dry and damp substrates and can be applied up to 1/8 inch thick without sag or flow. It contains no VOC's (volatile organic compounds).

- Meets - ACI 548.15-20 Specification for Crack Repair by Epoxy Injection
- Meets - ICRI Guide for Verifying Field Performance of Epoxy Injection of Concrete Cracks

### FEATURES

KEMKO® 022 is fast curing and its excellent handling characteristics makes it a possible application over a wide range of substrate temperatures while minimizing the interval between crack sealing and pressure injection grouting, particularly at low ambient and substrate temperatures. Contrasting component colors provides a visual key to proper proportioning and thorough mixing. The buttery consistency and its cured film hardness enhance the production rates for seal application, injection, and subsequent removal.

### TYPICAL USES

- Rapid cure epoxy for crack sealing prior to pressure injection.
- Excellent adhesion under wide ranges of substrate temperatures.
- Convenient 1:1 mix ratio.
- Contains special colorants for contrasting each component color.
- Buttery consistency for easy installation.
- Do not thin with solvents.

### LIMITATIONS

- The recommended minimum substrate temperature during installation and for cure is 40°F (40°C).
- The maximum in-service temperature should not exceed 20°F (10°C) below the HDT (Heat Deflection Temperature) in bonding applications subjected to substantial and sustained shear stresses that may cause creep.
- The curing agent has a faint odor of a mercaptan additive (slight rotten egg smell). Mercaptans are used to taint odorless natural gas for easier detection.
- Do not add solvents or otherwise thin this product.

### PACKAGING

Standard package sizes of Part A + Part B are 2 and 10 gallon (7.6 and 37.9 l.) kits. Cartridges available.

### 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

### 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			1:1 by volume
Mix Ratio by Weight			100:100
Color	Part A Part B Mixed	VISUAL	White Black Concrete Blue-Gray
Weight per Gallon	Part A Part B Mixed	ASTM D1475	11.8 lbs 11.8 lbs 11.8 lbs
Viscosity	Part A Part B Mixed	ASTM D2393	5600 poise 440 poise 300 poise
Non-Sag Thickness		ASTM D2730	1/8 Inch (3.18 mm)
Gel Time, 100 g	40°F (4°C) 73°F (23°C)	ASTM D2471	18 minutes 7 minutes
Compressive Yield Strength		ASTM D695	7,800 psi (53.8 MPa)
Compressive Modulus		ASTM D695	315,000 psi (2,172 MPa)
Bond Pull- Off Strength to Concrete	40°F (4°C) 73°F (23°C)	ASTM C1583	45 psi (0.3 MPa) 75 psi (0.5 MPa)
Heat Deflection Temperature		ASTM D648	110°F (43°C)

direct sunlight. Remixing of each component may be required upon prolonged storage.

### COLOR SELECTION

The standard color of the mixed components is concrete blue-gray.



Custom colors are available and may require minimum quantities and/or slightly higher cost.

## CHEMICAL RESISTANCE

KEMKO® 022 SuperSeal™ Paste 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) SSPC and NACE (National Association of Chemical Engineers) international standard.

## MIXING

KEMKO® 022 SuperSEAL Paste is a two-component adhesive. 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 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.

## AGGREGATE EXTENSION

One gallon of neat KEMKO® 022 SuperSEAL™ yields 231 cubic inches, which can be extended with uniform size 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.
- Broadcast 100 US Sieve Mesh aggregate that has been washed, dried, and bagged on patches or mortar repairs, to minimize tracking of uncured material if accidentally stepped on.

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

## 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.

## 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. Danger! Causes severe eye and skin burns. May cause allergic skin and respiratory reaction. Combustible, corrosive. Do not get in eyes, on 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.

## TECHNICAL SUPPORT

Additional information, technical assistance, and management services are also available from a ChemCo Systems' Technical Consultant at [sales@chemcosystems.com](mailto: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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