

Conlox Crack Injection System – K-075

Description:

K-075 is a two-component, VOC free, high performance polymer system. Low viscosity and very good wetting of concrete that can be contaminated with moisture and/or oil, and its ability to cure in adverse conditions make this product a “DO-IT-ALL” in anchoring or crack injection.

The low exotherm and negligible cure shrinkage of the K-075, makes it an excellent solution for repair of wide cracks (over 1/8”) and voids (4-6”) in concrete, masonry and wood structures. K-075 is 100% solids, VOC free and Butyl Glycidyl Ether (BGE)* free.

The K-075 conforms to ASTM C-881 or AASHTO M-235: Type II, Grade 2, Class B and C.

Product

Advantages:

- 100 % SOLIDS
- LOW VISCOSITY
- MOISTURE/OIL TOLERANCE
- LONG WORKING TIME
- FAST PROPERTY DEVELOPMENT
- LOW TEMPERATURE APPLICATION

Application

Guidelines:

Cap Seal with Copps’ Non-Corrosive Crack Sealing Paste (K-093) for manual or automatic injection.

Handling

Properties:

	RESIN	HARDENER	RESIN/HARDENER	
	A-227WH	B-102BK	BLEND	
COLOR	White	Black	Gray	
DENSITY, lb./gal	9.52	8.43	9.10	ASTM D 792
SPECIFIC GRAVITY, g/cm ³	1.14	1.01	1.09	ASTM D 792
VISCOSITY, cP or mPa.s	2,700	480	1,100	ASTM D 2196
MIX RATIO pbv (pbw)	1.6/1	(1.8/1)		
WORKING TIME (1 gallon mass), min	45			
GEL TIME (1 gallon mass), min	51.5			
PEAK EXOTHERM (1gallon mass), °F (°C)	371	(188.5)		ASTM D 2471
TACK-FREE THIN FILM SET TIME, h	12-15			Wooden Probe Method
TACK-FREE THIN FILM SET TIME @ 40 °F, h	48			Wooden Probe Method

Physical

Properties:

HARDNESS, Shore D	85		ASTM D 2240
COMPRESSIVE STRENGTH, psi (MPa)	8,000	(55.0)	ASTM D 695
COMPRESSIVE MODULUS, psi (MPa)	280,000	(1,931)	ASTM D 695
WATER ABSORPTION (7 day immersion), %	0.4		ASTM D 570
ADHESION TO CONCRETE, psi (MPa)	> 500	(3.4)	ASTM D 4541

Surface

Preparation:

Maximum adhesion is obtained when a substrate is free of loose matter, rust, dirt, soil, grease and other contaminants. Use of waterblasting, sandblasting, vacuuming, acid etching, cleaning with solvents, detergents and/or other agents followed by thorough rinsing and drying produce the best results.

In case of crack injection, any damaged concrete, soil, plants should be removed by compressed air, water jet, vacuum or other appropriate means.

Cracks usually require some type of surface seal to contain the injected resin. Use of Copps’ K-008 GP-ADHESIVE epoxy adhesive paste is preferable. The epoxy adhesive must be cured before epoxy injection is started.

Depending upon the injection technique some injection ports may be required. The port material, diameter, spacing, etc. will depend upon the particular crack and available pumping equipment.

*Butyl Glycidyl Ether. The EPA (SARA Title III, section 312) lists BGE as “Toxic” (per ANSI Z129.1) by skin absorption and an immediate health hazard.

Mixing:

In case of hand mixing, mix Resin and Hardener in a clean cylindrical container. Mix the blend thoroughly to ensure complete mixing. For large batches (1-3 gallons) use a hand drill mixer with a Jiffy blade. Periodically scrape the sides and bottom of the container to avoid unmixed material, which will result in soft spots in the cured product.

Once the Resin and Hardener are mixed together, an exothermic reaction takes place developing some heat that accelerates this process. The viscosity of this self-heating system first decreases, then, to the end of Gel Time, increases very fast until the material gels. At this time the product temperature keeps rising and in case of large batches can result in overheating with unpleasant fumes and smoke. **Do not mix more material than you are able to apply in one step. Start with small batches until you get familiar with the system's thermal behavior.**

When using meter mix equipment, follow the instructions of the pump manufacturer on checking and maintaining the specified mix ratio.

Uncured epoxy can be removed from tools and equipment with specially formulated non-flammable Copps Enviro Kleen (D-040), isopropyl alcohol, xylene, or mineral spirits.

The K-075 has a 12-month shelf life if stored at room temperature (72-75°F or 22-25°C) in sealed containers. Lower temperature storage may cause partial crystallization of the resin portion. If crystallization has occurred, heat the resin in its original container by placing it into another container with hot water. Change water to keep it hot for a few hours. Cool down to room temperature. If the viscosity of the resin is still higher than specified, repeat the procedure.

Long term storage can cause partial pigment settling. Before application stir the resin part to restore a uniform color.

Application:

Normally epoxy injection is started at the bottom of a vertical crack or at either end of a horizontal crack. Ports should be injected in this manner and injection should continue until the crack is full.

A few different types of injection equipment can be found on the market. We recommend positive displacement pumps capable of variable pressures that are equipped with pressure gages and static mixers.

After the injection resin is cured, ports should be removed and hole filled with epoxy paste adhesive. If required, the surface seal may be removed with a grinder.

SAFETY PRECAUTIONS

Avoid breathing of vapors. Forced local exhaust is recommended to effectively minimize exposure. NIOSH approved, organic vapor respirators and forced exhaust are recommended in confined areas, or when conditions (such as heated polymers, sanding) may cause high vapor concentrations. Do not weld on, burn or torch any epoxy material. Hazardous vapor is released when an epoxy is burned. Avoid skin or eye contact. Wash skin with soap and water if contact occurs. If eye contact occurs flush with water for 15 minutes and obtain medical attention. Read and understand all cautions on can labels and safety data sheets before using this material.

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