

General Purpose Epoxy – K-525

Description:

General Purpose Epoxy (GPE) is a 100% solids, low viscosity, epoxy coating for use in restoring concrete floors and concrete surfaces. GPE's unique chemistry permits rapid displacement of substrate moisture, allowing for use on damp surfaces without diminishing performance. **DO NOT APPLY GPE OVER STANDING WATER!**

Product

Advantages:

- 100 % SOLIDS, NO VOC'S
- ADHESION TO DAMP CONCRETE
- CONVENIENT MIX RATIO
- STRENGTHENS POROUS SUBSTRATES
- PRIMERLESS
- B.G.E.¹ FREE

Handling

Properties:

COLOR	Tan, Gray, Clear		
MIXING RATIO, pbv	2/1		
WORKING TIME, min	15-25		
GEL TIME, min	30-40		ASTM D 2471
MIXED VISCOSITY, cps	500-800		ASTM D 2196
TACK-FREE TIME			
(@ 72°F), h	6-9		
(@ 90°F), h	5-7		
(@ 50°F), h	12-16		
INITIAL CURE / FOOT TRAFFIC, @ 72°F, h	16-24		
COVERAGE* @ 10 mil (0.25 mm), ft ² /gal (m ² /l)	160	(3.93)	

*Varies with porosity of concrete

Physical

Properties:

SHORE HARDNESS, D scale	78		ASTM D 2240
COMPRESSIVE STRENGTH, psi (MPa)	12,000**	(83)	ASTM D 695
TENSILE STRENGTH, psi (MPa)	3,350	(23)	ASTM D 638
ELONGATION @ BREAK, %	20		ASTM D 638
ADHESION TO CONCRETE, psi	≥ 500	(concrete failure)	ASTM D 4541

** Lower modulus materials often do not exhibit a definite yield point. The compressive strength stated was recorded at a loading speed of 0.5in/min and at a point in which samples had been deeply compressed. The samples had not yet fractured at the point testing was discontinued.

Surface

Preparation:

GPE is used to strengthen and seal a porous concrete substrate, therefore, adhesion is paramount. To achieve excellent adhesion, the substrate should be free of all loose and foreign material and should be roughened slightly to provide a coarse profile by shot blasting or other mechanical method.

Before blasting any contaminates on/in the concrete must be identified. Oils, grease fats, waxes or other contaminates must be removed prior to roughening the concrete. These can be removed with an application of warm (120-140 °F or 49-60 °C) caustic detergent, steam cleaning or pressure washing. Degrease the floor; follow with a hot water rinse. Repeat this procedure until the water does not "bead up" on the concrete.

Shot blasting using self-propelled, self-contained equipment is the recommended preparation method. NEW CONCRETE MUST CURE A MINIMUM OF 28 DAYS PRIOR TO THE APPLICATION OF ANY EPOXY. CONCRETE MUST BE TESTED FOR MOISTURE AND VAPOR TRANSMISSIONS BEFORE COATING.

1 - 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:

All GPE components should be at 70-90°F (21-32°C) prior to mixing. Pour the contents of the hardener (Part B) into the resin (Part A) and blend thoroughly using a jiffy blade and slow speed hand drill for 3 minutes. Mix at slow speeds (less than 500 rpm's) to avoid air entrainment. Do not mix more material than can be used within the stated working time. Remember - you will have less working time at higher temperatures.

GPE, before it has hardened, can be removed from tools with Enviro-Clean or warm soapy water.

Application:

Relative humidity and dew point must be known before application to avoid adhesion failures. The dew point is used to predict the substrate temperature at which air begins to condense, in the form of water, on the substrate. Never apply a coating unless the concrete surface temperature is 5°F (2°C) above the dew point. A dew point calculation chart is available from a Copps Technical Representative.

GPE can be applied by brush or short nap roller. Do not thin GPE! Application thickness can be varied from 10 - 20 mils. If a second coat is desired it may be applied after the initial coat has "tacked up" [Generally 6-9 hours at 72°F (22°C)]. Do not apply to concrete colder than 50°F (10°C) as insufficient curing may result.

Packaging:

GPE is conveniently packaged in a pre-measured 3.0 (11.4L) or 15.0 (56.8L) gallon kits containing a Resin (Part A) and Hardener (Part B); larger bulk quantities are also available.

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 on or near 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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