

Armorgard 507 – K-507

Description:

Copps Armorgard 507 is a 100 % solids, self leveling, primerless, odorless, clear epoxy flooring system designed to resurface concrete. Armorgard 507 has excellent resistance to most harsh chemicals and can be applied as thin as 10 mil. Armorgard 507 is USDA approved for application to structural surfaces or surfaces that will receive incidental food contact. Adhesion to wood, concrete and most metals is excellent. Armorgard 507 can be used as a clear coating or filled with a colored aggregate to produce a colored/clear topping.

Armorgard 507 was designed to protect floors from the light to medium traffic found in power plants, chemical processing, pulp and paper mills, the food and beverage industry, and anywhere a clean, attractive appearance is desired.

Product

Advantages:

- PRIMERLESS
- CHEMICALLY RESISTANT
- 100 % SOLIDS
- BONDS TO DAMP CONCRETE

Application Guidelines:

Application thickness can be varied from a 10 mil rolled coat (unfilled) to a 1/8" colored broadcast resurfacer.

Handling

Properties:

COMPONENTS	Resin/Hardener/Colored Aggregate (optional)	
COLOR	Clear/colored aggregates	
MIXED VISCOSITY, cP	600	ASTM D 2196
WORKING TIME, min	25	
GEL TIME, min	30	
TACK-FREE TIME, h	7-8	
INITIAL CURE or FOOT TRAFFIC TIME, h	12-16	
COVERAGE* @10 mil (unfilled), ft ² /gal	160	
APPLICATION TEMPERATURE, °F		
Ideal	70-80	
Acceptable	55-90	

*Varies with porosity of concrete

Physical

Properties:

HARDNESS, Shore D	82	ASTM D 2240
ADHESION TO CONCRETE, psi	> 800 (100 % failure in concrete)	ASTM D 4541
COMPRESSIVE STRENGTH, psi	12,000	ASTM D 695
TENSILE STRENGTH, psi	6,100	ASTM D 638
ELONGATION @ BREAK, %	6	ASTM D 638
FLEXURAL STRENGTH, psi	10,000	ASTM D 790
TABER ABRASION @1000g /1000cycles,mg	60	ASTM D 4060

Chemical

Resistance:

Excellent Resistance		Very Good	Not Recommended
Motor Oil	10 % Sulfuric Acid	10 % Citric Acid	50% Acetic Acid
Ethylene Glycol	50 % Sodium Hydroxide	1,1,1- Trichloroethane	Methylene Chloride
Kerosene	10 % Hydrochloric Acid	Toluene	Methyl Ethyl Ketone
Water	36 % Hydrochloric Acid	Acetone	Methanol
10 % Lactic Acid	Skydrol	Xylene	Ethyl Alcohol
10 % Nitric Acid	Bleach	50 % Phosphoric Acid	
10 % Acetic Acid	Cyclohexanol	30% Nitric Acid	

The above recommendations are based on a 28 day immersion @ 72°F (22°C).

**Surface
Preparation:**

Armorgard 507 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.

Before blasting, any contaminants on/in the concrete must be identified. Oils, grease, fats, waxes or other contaminants must be removed prior to roughening the concrete. These can be removed with an application of warm (120-140 °F) caustic detergent, steam cleaning or pressure washing. De-grease 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 28 DAYS PRIOR TO THE APPLICATION OF ANY EPOXY. CONCRETE MUST BE TESTED FOR MOISTURE AND VAPOR TRANSMISSION BEFORE APPLICATION.

Mixing:

To mix Armorgard 507 pour the contents of the pail marked Hardener into the larger Resin pail. Immediately mix for 3 minutes (or until uniform) using a Jiffy Mixer and a slow speed drill. Mix at slow speed (less than 500 rpm) 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.

Armorgard 507, before it has hardened, can be removed from tools with Copps Enviro Kleen solvent.

Application:

Relative humidity and dew point must be determined before application to avoid adhesion failures. The dew point is used to predict the substrate temperature at which moisture begins to condense, in the form of water, on the substrate. Never apply a coating unless the concrete surface temperature is 5 °F above the dew point. This temperature difference must be observed until the epoxy coating is cured to a tack-free state. A dew point calculation chart is available from a Copps Technical Representative.

PRIMER: 1) The application of a primer is recommended to reduce concrete outgassing, in turn producing a smoother coating. 2) Armorgard 507 can be applied to prepared concrete without a primer.

Apply with a squeegee and a medium (3/8" nap) roller.

PRIMER MIXING: To mix Copps K-049 concrete primer pour the contents of the can marked Hardener into the large pail (resin). Immediately mix for 3 minutes (or until uniform) using a Jiffy Mixer and a slow speed drill. Mix at slow speed (less than 500 rpm) to avoid air entrainment.

PRIMER APPLICATION: Apply 5 mil of Copps K-049 Concrete Primer to the prepared concrete with a short nap (1/4") roller. This insures adhesion to the concrete substrate.

DO NOT apply K-049 over standing water. Damp or dry concrete is acceptable.

LIGHT "ROLLED" ARMORGARD 507 COAT FOR LIGHT DUTY - 10-30 mil liquids only. Apply with a squeegee and a medium (3/8") nap roller.

MEDIUM DUTY "BROADCAST" COATING - 30-60 mil: Apply liquid 15-30 mil thick then evenly broadcast colored aggregate into the wet coating until it is saturated. Let cure (dry), then brush off the excess aggregate and apply a 5-10 mil liquids only topcoat to lock down the exposed aggregate. Repeat as needed to achieve your desired texture.

Packaging:

Armorgard 507 is conveniently packaged in pre-measured 1.5 or 4 gallon kits containing a resin (Part A) and a 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 polymer, 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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