

ARMORGARD 506

FAST CURING, CHEMICALLY RESISTANT, CLEAR FLOORING SYSTEM

LOW TEMP CURE (40 °F)
PRIMERLESS
USDA APPROVED
EXCELLENT CHEMICAL RESISTANCE

FAST WALK-ON TIME (TACK-FREE IN 3 HOURS)
100 % SOLIDS
ENVIRONMENTALLY FRIENDLY
BONDS TO DAMP CONCRETE

PRODUCT GENERAL INFORMATION

Copps Armorgard 506 is a 100 % solids, self leveling, primerless, no odor, clear epoxy flooring system designed to resurface concrete. Armorgard 506 has been specifically formulated to reduce the organic acids found in the food and beverage industry. Armorgard 506 has excellent resistance to most harsh chemicals and can be applied as thin as 10 mil. Armorgard 506 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 506 can be used as a clear coating or filled with a colored aggregate to produce a colored/clear topping. Armorgard 506 has a very fast tack-free time while providing a useful working time.

Armorgard 506 was designed to protect floors from 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.

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

PACKAGING CONVENIENCE

Armorgard 506 is conveniently packaged in pre-measured 1.5 or 3 gallon kits containing a resin (Part A) and a hardener (Part B). Larger bulk quantities are also available.

HANDLING PROPERTIES @ 72 °F

COMPONENTS	Resin/Hardener/Colored Aggregate (optional)	
COLOR	Clear with colored aggregates: Grey, Red, Black, Natural-Buff	
MIXED VISCOSITY, cP	1,400	ASTM D 2196
WORKING TIME, min	25	
GEL TIME, min	35	
TACK-FREE TIME, h	3-4	
INITIAL CURE or FOOT TRAFFIC TIME, h	8	
COVERAGE* @ 10 mil (unfilled), ft ² /gal	160	
APPLICATION TEMPERATURE, °F		
Ideal	70-80	
Acceptable	55-90	
MIXING RATIO	1.5 parts resin to 1 part hardener by volume	

*Varies with porosity of concrete.

TYPICAL CHARACTERISTICS

HARDNESS, Shore D	82	ASTM D 2240
ADHESION TO CONCRETE, psi	> 800 (100 % failure in concrete)	
COMPRESSIVE STRENGTH, psi	9,500	ASTM D 695
TENSILE STRENGTH, psi	7,000	ASTM D 638
ELONGATION @ BREAK, %	6	ASTM D 638
FLEXURAL STRENGTH, psi	11,500	ASTM D 790
LINEAR SHRINKAGE	0.0006	ASTM D 2566

HUMIDITY/DEW POINT

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 air 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.

CHEMICAL RESISTANCE (28 day immersion @ 72 °F)

Excellent Resistance		Very Good	Not Recommended
Motor Oil	10 % Nitric Acid	Methanol	50 % Acetic Acid
Unleaded Gasoline	10 % Acetic Acid	20 % Acetic Acid	50 % Nitric Acid
Kerosene	10 % Sulfuric Acid	20 % Oleic Acid	Methylene Chloride
Diesel Fuel	50 % Sulfuric Acid	Ethyl Alcohol	Methyl Ethyl Ketone
Mineral Spirits	70 % Sulfuric Acid	Toluene	
Ethylene Glycol	50 % Sodium Hydroxide	Acetone	
Water	Skydrol		
10 % Oleic Acid	Bleach		
10 % Hydrochloric Acid	Xylene		
10 % Lactic Acid	1,1,1,-Trichloroethane		
10-30 % Citric Acid	Cyclohexanol		

SURFACE PREPARATION

Armorgard 506 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 either shot blasting or acid etching.

Before blasting or acid etching, 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) 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 a highly recommended preparation method.

Acid etching can be performed using a solution of 50 % muriatic (Hydrochloric) acid and 50 % water. (Always add acid to water slowly when mixing). The acid solution should be carefully applied to all surfaces to be coated. The acid will effervesce (foam or bubble) on the concrete if it is free of a sealer or contaminate. If the acid does not effervesce, contact a Copps representative immediately. Do not apply the epoxy. Leave the acid on the concrete for 10-15 minutes then rinse the entire area well with cold water. If the profile is not sufficient - repeat the procedure. We recommend a surface profile similar to 60-100 grit sandpaper. When the profile is sufficient, vacuum up all standing water and allow the surface to dry. Muriatic acid can be dangerous to handle, so proper safety equipment/ventilation should be used. Do not allow the acid wash to enter any drains or sewers.

New concrete must cure a minimum of 28 days prior to the application of any epoxy and tested for moisture content.

MIXING

To mix Armorgard 506 pour the contents of the pail marked Hardener (B-506) into the larger Resin pail. Immediately mix for 3 minutes using a Jiffy Mixer and a slow speed drill. Mix at slow speed (less than 850 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.

APPLICATION

PRIMER: 1) The application of a primer is recommended to reduce concrete outgassing, in turn producing a smoother coating.

2) Armorgard 506 can be applied to prepared concrete without a primer.

LIGHT "ROLLED" COAT FOR LIGHT DUTY - 10-30 mil liquids only: Applied with a squeegee and a medium (1/2" 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.

CLEAN-UP

Armorgard 506, before it has hardened, can be removed from tools with Copps Enviro Kleen solvent or warm soapy water.

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 material safety data sheets before using this material

WARRANTY AND DISCLAIMER

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