

Armorgard 601T- K-601T

Description:

Copps Armorgard 601T is a 100 % solids, chemically resistant, no odor, troweled epoxy flooring system. 601T was designed to provide outstanding protection, for new or old damaged concrete, against a wide range of chemicals, specifically organic acids, solvents, and mineral acids found in food processing and chemical plants. Armorgard 601T 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 601T was designed to protect floors (specifically, heavy industrial traffic from steel-wheeled carts and forklift trucks) making it ideally suited for chemical processing, food and beverage plants, power plants, pulp and paper mills, utilities and anywhere a clean, tough floor is needed.

Product

Advantages:

- OUTSTANDING CHEMICAL RESISTANCE
- 100 % SOLIDS
- EXCELLENT IMPACT RESISTANCE
- LOW TEMPERATURE CURE (40 °F or 4.4 °C)
- EXCELLENT WEAR RESISTANCE
- SHORT WALK-ON TIME

Application

Guidelines:

Application thickness can be varied from 1/4" to 1/2" (6.3-12.7 mm) troweled topping.

Application Temperature: Ideal 70-80°F (21-27 °C), 40-90°F (4-32°C) is acceptable. Working time and tack-free time will be extended at lower temperatures, and reduced at elevated temperatures.

Handling

Properties:

COMPONENTS	Resin/Hardener/Troweling Aggregate (Copps K-049 Primer is required for maximum service)	
COLOR	Gray, Red, Natural	
CONSISTENCY	Trowelable Mortar	
WORKING TIME, h	1	
GEL TIME, h	2	
TACK-FREE TIME (1/4" or 6.3 mm thick), h	3.5	
INITIAL CURE OR FOOT TRAFFIC TIME, h	4-5	
FULL CURE (FOR CHEMICAL IMMERSION), h	48-72	
COVERAGE	15	(1.4)
per 42lb (19 kg) kit @ 1/4" (6.3 mm), ft. ² (m ²)		

Physical

Properties:

HARDNESS, Shore D	87		ASTM D 2240
ADHESION TO CONCRETE, psi (MPa)	> 500	(3.4)(100% failure in concrete)	ASTM D 4541
(Tested with primer K-049)			
COMPRESSIVE STRENGTH, psi (MPa)	12,000	(82.6)	ASTM D 695
	0		
TENSILE STRENGTH, psi (MPa)	2,300	(15.9)	ASTM D 638
FLEXURAL STRENGTH, psi (MPa)	4,800	(33.1)	ASTM D 790

Excellent Resistance

Motor Oil	10 % Nitric Acid
Unleaded Gasoline	10 % Sulfuric Acid
Gasohol	50 % Sulfuric Acid
Kerosene	70 % Sulfuric Acid
Diesel Fuel	10 % Hydrochloric Acid
Ethylene Glycol	10 % Phosphoric Acid
Water	50 % Phosphoric Acid
10 % Lactic Acid	75 % Phosphoric Acid
20 % Lactic Acid	50 % Sodium Hydroxide
10 % Acetic Acid	Bleach
20 % Acetic Acid	Xylene
10 % Oleic Acid	Ethyl Alcohol
10 % Citric Acid	Methanol
20 % Citric Acid	C ₆ -C ₁₂ Fatty Acids
Cyclohexanol	50 % Gluconic Acid

Very Good

1,1,1-Trichloroethane
Butyl Cellosolve
Toluene
30 % Nitric Acid
Skydrol
36 % Hydrochloric Acid
90 % Oleic Acid

Not Recommended

Methyl Ethyl Ketone
50 % Acetic Acid
50 % Nitric Acid
Methylene Chloride
40 % Lactic Acid

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

Surface Preparation:

Armorgard 601T 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 shot 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. De-grease the floor, follow with a hot water rinse. Repeat this process 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/ 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 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. 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 your Copps representative.

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 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 (0.1 mm) of Copps K-049 Concrete Primer to the prepared concrete with a short nap (1/4" or 6.4 mm) roller. This insures adhesion to the concrete substrate.

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

MIXING 601T: To mix Armorgard 601T pour the contents of the can marked Hardener into the larger resin can. Immediately mix for 2-3 minutes 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. Add this liquid to a rotating pail mixer and add half of the troweling aggregate, let mix for 1-2 minutes, then add the remaining troweling aggregate, mix for 2-3 minutes.

601T APPLICATION: Immediately pour out the mixed kit onto the floor in 7-10" (18-25 cm) wide strips. Spread evenly with a clean trowel (steel finishing trowel, 3 x 14). Finish each kit before mixing another to insure proper working times and surface textures. As the material begins to set up the trowel will pull on the surface creating a porous surface, this can be corrected by cleaning the trowel with isopropyl alcohol or acetone.

The 601T can be applied to the K-049 immediately or up to 24 hours later @ 72°F (22°C). If more than 24 hours have passed it is necessary to scuff the primer surface if it is not tacky.

Do not rapidly raise the air or substrate temperature, this can cause outgassing of the concrete and joint shrinkage. This can lead to product cracking or failure.

601T will leave a moderately textured surface.

Armorgard 601T, before it has hardened, can be removed from tools with Copps Enviro Kleen solvent or warm soapy water.

Packaging:

Armorgard 601T is conveniently packaged in pre-measured (15 ft.² or 1.4 m² @ 1/4" or 6.3 mm) 3 component kits, containing a resin (Part A), hardener (Part B), and a troweling aggregate (Part C). Larger bulk quantities are also available. The troweling aggregate is supplied in pre-measured bags.

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 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. Use soft rubber wheels on any vehicle that will be traveling on the floor; this will reduce scuffing and abrasion marks.

FOR INDUSTRIAL USE ONLY

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