

## Armorgard 700UV – K-700UV

### Description:

Copps Armorgard 700UV is a 100 % solids, self-leveling, decorative, primerless, no odor, clear epoxy flooring system designed to resurface concrete. Armorgard 700UV has been formulated to reduce the "yellowing" that conventional epoxy systems develop. Armorgard 700UV has excellent resistance to most harsh chemicals. Armorgard 700UV 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 700UV was designed to provide beautiful protection from the light to medium traffic found in kitchens, entrance ways, shower rooms, locker rooms, schools, hospitals, food and beverage industry areas, and anywhere a decorative, non-skid/chemical resistant floor is needed.

### Product

### Advantages:

- PRIMERLESS
- CHEMICALLY RESISTANT
- 100 % SOLIDS, ZERO VOC'S
- BONDS TO DAMP CONCRETE

### Application Guidelines:

Application thickness can be varied from a 30 mil (0.8 mm) broadcast to a 1/4" (6.4 mm) (aggregate filled) slurry.

### Handling

### Properties:

COLOR	Clear, 14 Decorative Tweed Patterns	
MIXED VISCOSITY @ 77 °F, 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	
APPLICATION TEMPERATURE, °F (°C)		
Ideal	70-80 (21-27)	
Acceptable	55-90 (13-32)	
COVERAGE* @ 10mil (0.25 mm) (unfilled), ft <sup>2</sup> /gal (m <sup>2</sup> /l)	160 (4.2)	

\*Varies with porosity of concrete.

### Physical

### Properties:

HARDNESS, Shore D	82		ASTM D 2240
ADHESION TO CONCRETE, psi (MPa)	> 800 (5.5)	(100 % failure in concrete)	ASTM D 4541
COMPRESSIVE STRENGTH, psi (MPa)	12,000 (82.8)		ASTM D 695
TENSILE STRENGTH, psi (MPa)	6,100 (42)		ASTM D 638
ELONGATION @ BREAK, %	6		ASTM D 638
FLEXURAL STRENGTH, psi (MPa)	10,000 (69)		ASTM D 790
TABER ABRASION @ 1000 g/1000 cycles, mg	60		ASTM D 4060

### Chemical

### Resistance:

Excellent Resistance		Very Good	Not Recommended
Motor Oil	10 % Sulfuric Acid	10 % Citric Acid	50 % Acetic Acid
Unleaded Gasoline	70 % Sulfuric Acid	20 % Acetic Acid	50 % Nitric 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 700UV 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 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 28 DAYS PRIOR TO THE APPLICATION OF ANY EPOXY. CONCRETE MUST BE TESTED FOR MOISTURE AND VAPOR TRANSMISSION BEFORE APPLICATION.**

**Mixing:**

To mix Armorgard 700UV pour the contents of the pail marked Hardener 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 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 700UV, before it has hardened, can be removed from tools with Copps Enviro Kleen solvent or warm soapy water.

**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 a Copps Technical Representative.

To achieve the smoothest coating possible two broadcast applications are recommended.

**PRIMER:** Armorgard 700UV can be applied to prepared concrete without a primer. The application of a primer is recommended to reduce concrete outgassing, in turn producing a smoother coating.

**"BROADCAST" COATING (LIGHT TO MEDIUM DUTY) - 30-60 mil (0.76-1.52 mm):** Apply liquid 15-20 mil (0.38-0.51mm) thick, then evenly broadcast the color quartz aggregate into the wet coating until it is saturated (0.5 lb/ft<sup>2</sup> or 2.44 kg/m<sup>2</sup>). Let cure (dry), then brush off the excess aggregate and apply a 15-20 mil (0.38-0.51 mm) liquid coat and saturate with color quartz (0.5 lb/ft<sup>2</sup> or 2.44 kg/m<sup>2</sup>). Brush off the excess color quartz and apply a liquids only 10 mil (0.25 mm) topcoat to lock down the exposed aggregate. The lockdown coat can be varied to achieve the desired non-slip texture.

**HEAVY DUTY COATING - 1/8" (125 mil or 3.18 mm) - 1/4" (250 mil or 6.36 mm):** Repeat above process as needed to achieve your desired thickness or mix up a slurry mortar with the color quartz.

**Packaging:**

Armorgard 700UV is conveniently packaged in a pre-measured 2.0 gallon (7.6 l) kit; containing a resin (Part A) and a hardener (Part B). Larger bulk quantities are also available. Decorative color quartz aggregate can be 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 (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. Use soft rubber wheels on any vehicle that will be traveling on the floor; this will reduce scuffing and abrasion marks.

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