

## Armorgard 295 – K-295

### Description:

Copps Armorgard 295 is a low VOC\*, two-component, chemically resistant, epoxy flooring vapor retarder for concrete. Armorgard 295 greatly reduces the passage of water vapor and moisture through slabs. Armorgard 295 reduces water vapor transmission from levels as high as 25 lbs. /24hr•1000ft<sup>2</sup> to 3 lbs. or less. It may be used as a stand-alone system or top coated with 100% solids epoxy to create a variety of colors and textures.

Armorgard 295 was designed to protect floors from the light to medium traffic found in chemical processing, power plants, pulp and paper mills, food and beverage plants, utilities and anywhere a clean, tough floor is needed. Application thickness may be varied from 15-40 mils depending upon vapor transmission rates. Armorgard 295 (un-broadcasted) will leave an off-white, matte finish with moderate non-slip properties. Broadcasting followed by a topcoat is recommended for aesthetics and ease of cleaning.

### Product

### Advantages:

- 1-COAT APPLICATION UP TO 20 LBS MVER
- APPLY TO DAMP OR DRY CONCRETE
- MAY BE APPLIED TO 5 DAYS OLD CONCRETE
- EASY TO INSTALL
- FAST WALK-ON TIME
- LOW VOC

### Handling

### Properties:

COMPONENTS	Resin/Hardener	
COLOR	Off-White	
MIXED VISCOSITY, cP or mPa.s	830	ASTM D 2196
WORKING TIME, min	60	
TACK-FREE TIME, h	6-10	
INITIAL CURE or FOOT TRAFFIC, h	12-24	
COVERAGE, @ 20 mil, ft <sup>2</sup> /gal	80	
APPLICATION CONDITIONS,		
Ideal temperature, F (°C)	60-75 (16-24)	
Acceptable temperature, F (°C)	50-85 (10-30)	

### Physical

### Properties:

HARDNESS, Shore D	84	ASTM D 2240
ADHESION TO CONCRETE, psi	> 500 (100 % failure in concrete)	
COMPRESSIVE STRENGTH, psi	11,900	ASTM D 695
FLEXURAL STRENGTH, psi	5,800	ASTM D 790

### Surface

### Preparation:

Armorgard 295 is used to strengthen and seal 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 by shot-blasting, scarifying or grinding to provide a coarse profile. Rinse all surfaces to be coated with clean water, leaving no standing water behind.

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) caustic detergent, steam cleaning or pressure washing. De-grease the floor, followed with a hot water rinse. Repeat this process until the water does not "bead up" on the concrete. Concrete sealers and hardeners must be identified, and removed by shot blasting.

Shot blasting using self-propelled, self-contained equipment is the recommended preparation method.

\*VOC content of K-295 = 54.82 g/l or 0.46 #/gallon

**Mixing:**

Mix the pail marked Resin for 1-2 minutes with a slow speed mixer and a jiffy blade. Add the can of Hardener to the Resin portion and mix an additional 3 minutes. Mix at slow speed (less than 500 rpm) to avoid air entrapment. Ensure that the material from the sides and bottom of the pail have been thoroughly mixed in. Do not mix more material than what will be immediately applied.

Armorgard 295, before it has hardened, can be removed from tools with Copps Enviro Kleen solvent or mineral spirits.

**Application:**

**WATER-VAPOR EMISSION TESTING:** The MVER (Moisture vapor emission rate) of the concrete slab to be treated should be measured prior to the application of Armorgard 295. Anhydrous Calcium Chloride testing as per ASTM F 1869-98 is the recommended method for this test. Warranty of the Armorgard 295 product will be void without proof of vapor emission testing.

Using the "APPLICATION RATES" chart below, determine the amount of Armorgard 295 to install. Apply the mixed material with a short nap roller or squeegee to the still damp substrate. (As long as there is no standing water or puddles present; anything from light to dark gray concrete is acceptable.) The product may be applied to dry substrate but a moist surface generally results in easier application and improved surface appearance. Work the material into the pores of the concrete using a long handled scrub brush. Follow with a short nap roller to achieve uniform coverage. **Immediately** broadcast with clean, dry silica sand to rejection. (Up to 30-50 lb./100ft<sup>2</sup>). Copps C-009 sand is recommended for this purpose.

Carefully remove (sweep) any loose sand after a curing period of 12-24 hours before applying a second coat (if necessary) or the desired top coating. If a second coat of Armorgard 295 is required, **DO NOT** wet the substrate prior to application. Otherwise installation may proceed in the same manner as the initial coat.

Consult with Copps Industries Technical Department if there are any questions in this area.

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

**APPLICATION RATES**

MVER (lb./24 h • 1000 ft <sup>2</sup> )	Number of Coats	Application Rate (ft <sup>2</sup> /kit)*	Approx. Thickness (mils)	Est. broadcast sand per Kit (lbs.)
Up to 10	1	340	14-16	105-170
10-15	1	280	16-18	90-140
15-20	1	220	22-24	70-110
20-25	2	220 (1 <sup>st</sup> coat) 280 (2 <sup>nd</sup> coat)	22-24 16-18	70-110 90-140

\*Application rates are for a 3-gallon kit.

**Packaging:**

Armorgard 295 is conveniently packaged in a pre-measured 3-gallon kit containing a pre-measured resin (Part A) and hardener (Part B). Larger bulk quantities are also available. C-009 broadcast aggregate used is determined by the application thickness (See application rates chart).

**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.

**FOR INDUSTRIAL USE ONLY****WARRANTY AND DISCLAIMER**

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