

ARMORGARD 505 – K-505

Description:

Armorgard 505 is a 100% solids, self-leveling, primerless, odorless epoxy form coating for precast, tilt-up, slip form or cast-in-place applications. Armorgard 505 is formulated to provide a hard, tough coating for wood and metal concrete forms. Use of Armorgard 505 transforms a “rough” form into a hard, smooth surface, creating an “architectural” quality cast. Armorgard 505 does not contain VOC’s or butyl glycidyl ether (BGE)*.

Product

Advantages:

- EXTREMELY TOUGH SURFACE
- SINGLE COAT APPLICATION
- ADHESION TO WOOD, CONCRETE, STEEL
- REDUCES FORM PREP TIME
- STYRENE FREE
- BONDS TO DAMP CONCRETE

Application

Guidelines:

Normal application thickness is 20-30 mil (0.50-0.76 mm). Application varies depending on the porosity and roughness of the surface. A single build may be applied to horizontal surfaces up to 1/8" thick (125 mil or 0.3 cm).

Handling

Properties:

MIX RATIO, pbv (pbw)	2/1	(100/44.6)	
COLOR	Clear		
MIXED VISCOSITY, cP or mPa.s	600		ASTM D 2196
WORKING TIME, min	25		
GEL TIME, min	30		ASTM D 2471
(See the chart on the next page)			
TACK-FREE TIME, h	5-6		
INITIAL CURE, h	9-12		
APPLICATION TEMPERATURE, °F (°C)			
Ideal	70-80	(21-27)	
Acceptable	55-90	(13-32)	
COVERAGE* @ 20 mil (0.50 mm), ft ² /gal	80		
*Varies with porosity of surface			

Physical

Properties:

HARDNESS, Shore D	82		ASTM D 2240
MAXIMUM SERVICE TEMPERATURE, °F (°C)	135	(57)	
ADHESION, psi (MPa)			
to steel	2,300	(15.9)	
to wood	>300	(2.1) (100% failure in wood)	
to concrete	>800	(5.5)(100% failure in concrete)	
COMPRESSIVE STRENGTH psi (MPa)	12,000	(82.8)	ASTM D 695
TENSILE STRENGTH, psi (MPa)	6,100	(42.1)	ASTM D 638
ELONGATION @ BREAK, %	6		ASTM D 638

Armorgard 505 will soften when exposed to extreme precast temperatures. A temperature of no greater than 135°F (57 °C) is recommended when removing forms coated with Armorgard 505.

*Butyl Glycidyl Ether. The EPA (SARA Title III, section 312) lists it (BGE) as “Toxic” (per ANSI Z129.1) by skin absorption and an immediate health hazard.

Surface Preparation:

To achieve excellent adhesion, the substrate must be free of all loose and foreign material and should be clean. Oils, grease, waxes or other contaminants must be removed prior to coating. These can be removed with a solvent wipe using isopropyl alcohol or acetone or an application of warm (120-140°F) caustic detergent followed by a hot water rinse. Repeat this procedure until the water does not "bead up" on the form. Armorgard 505 will not bond to a contaminated surface.

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 form surface temperature is 5°F (2.5°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.

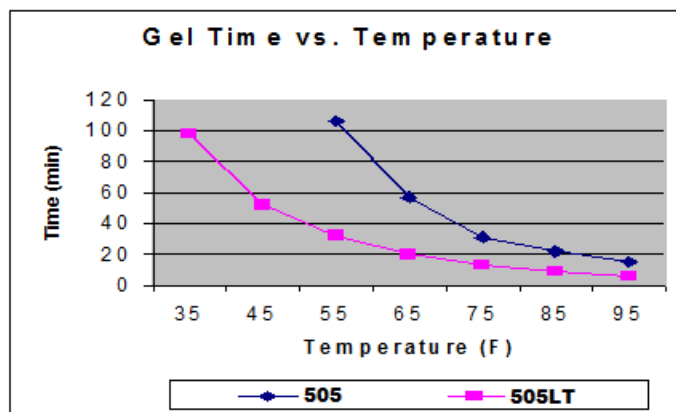
Mixing:

The storage temperature of Armorgard 505 will greatly affect the ease of mixing, application and curing time. For best results, Armorgard should be stored at **(50-70°F or 10-22°C)** for at least 24 hours before use. Mix 2 parts A (resin) to 1 part B (hardener) 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.

Application:

Armorgard 505 can be applied with a squeegee, brush, non-shedding roller or a grooved fiberglass roller. Re-coating a used form requires a light sanding to remove concrete residue and improve surface profile and adhesion. DO NOT "OVERWORK" MATERIAL.

Below chart illustrates differences in cure speed between Armorgard 505 and Armorgard 505LT in relation to temperature.



SAFETY PRECAUTIONS

Mix and pour in a well-ventilated area. Avoid contact with skin and eyes. If contact does occur, wash skin with soap and water and seek medical help. Read and understand all CAUTIONS on container labels and safety data sheets before using this material.

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 ON OR NEAR, ANY EPOXY MATERIAL. HAZARDOUS VAPOR IS RELEASED WHEN AN EPOXY IS BURNED.**

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