

ARMORGARD 541 - K-541

Description:

Armorgard 541 is a 100 % solids, thixotropic, primerless, odorless epoxy coating for foam patterns and molds used in precast concrete applications. Armorgard 541 is formulated to provide a hard, tough coating for EPS foam and Styrofoam without the use of hazardous – foam damaging solvents. Use of Armorgard 541 transforms a “rough” foam structure into a hard, sandable surface, creating an “architectural” quality cast. Armorgard 541 provides a convenient work life. Armorgard 541 was designed from conception to be the ideal foam coating. The product is colored for an easy visual check of thickness.

Product

Advantages:

- SOLVENT FREE-ZERO VOC
- SINGLE COAT APPLICATION
- LOW HEAT ON CURE
- EXTREMELY TOUGH, NON BRITTLE SURFACE
- SEALS HOTWIRE CUT FOAM PATTERNS
- DOES NOT DISTORT MOLD SHAPE

Application

Guidelines:

Normal application thickness is 15-30 mil (0.38-0.76 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). Armorgard 541 is conveniently packaged in 4 gallon, pre-measured kits, or bulk 5 gallon, 55 gallon and 275 gallon totes.

Handling

Properties:

MIX RATIO, pbv	5/1	
COLOR	Lt. Blue	
MIXED VISCOSITY, cP or mPa.s	4,500	ASTM D 2196
WORKING TIME, min	60	
GEL TIME, min	90	
TACK-FREE TIME, h	19-20	
INITIAL CURE, h	24-30	
APPLICATION TEMPERATURE, °F (°C)		
Ideal	70-80	(21-27)
Acceptable	55-90	(13-32)
COVERAGE* @ 15 mil or 0.38 mm, ft ² /gal (m ² /l)	107	(2.6)
*Varies with porosity of surface		

Physical

Properties:

HARDNESS, Shore D	79	ASTM D 2240
MAXIMUM SERVICE TEMPERATURE, °F (°C)	175	(79)

Armorgard 541 will soften when exposed to extreme precast temperatures. A service temperature of no greater than 110 °F (43 °C) is recommended when removing forms coated with Armorgard 541.

Surface

Preparation:

To achieve excellent adhesion, the substrate should be free of all loose and foreign material and should be clean. If present, any oils, greases, or other contaminants must be removed prior to coating. Armorgard 541 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:

Mix 5 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.

**Curing
Procedures:**

Armorgard 541 can be applied with a squeegee, brush, non-shedding roller or a grooved fiberglass roller. Re-coating a used foam piece may require a light sanding to remove any residue from previous casts.

SAFETY PRECAUTIONS

Armorgard 541, before it is fully cured (hard), may be removed from tools with Copps Enviro Kleen solvent or warm soapy water.

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.**

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.

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