

K A U F M A N

PRODUCT
INFORMATION

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SurePoxy HM 12

Description

SurePoxy HM 12 is a three-component, moisture insensitive, organic, solvent-free, waterborne epoxy bonding agent and steel reinforcement protection system. This unique blend of water based epoxy and selected cementitious components produces a structural adhesive and coating that is unique because it provides an extended pot life and open time making application easier. In addition, SurePoxy HM 12 is green to provide better visibility during application. SurePoxy HM 12 will gain strength at approximately the same rate as structural concrete.

Uses

SurePoxy HM 12 is especially recommended for bonding fresh concrete or mortar overlays, toppings, patches and shotcrete to existing substrates. The long open time of SurePoxy HM 12 allows the contractor up to 12 hours at 70°F in which to place fresh concrete over the coated surface. This provides the contractor with plenty of time, to place reinforcement or forms, before the new concrete is placed.

SurePoxy HM 12 is also an excellent anti-corrosion coating, especially for areas with thin concrete cover to protect reinforcing steel when applied to properly prepared rebar.

Further, HM 12 is an excellent cement modifier for cement based patching and repair mortars to reduce permeability and to increase strengths.

Features

- Excellent adhesion to concrete and steel
- Allows for application of topping up to 12 hours after application
- Integral corrosion inhibitor
- Effective barrier against penetration of water and chlorides
- Extended contact time
- Alkalinity similar to concrete
- Not a vapor barrier
- Reduced corrosion rate by over 40%
- VOC compliant
- Green color for added visibility
- May be applied between 40-95°F
- Cleans up with water

Physical Properties

@ 72°F and 50% relative humidity.

Uncured

Color	White
Initial Viscosity	300-500 cps.
Shelf Life	1 year minimum
Pot Life, 1 gal.	90 minutes
Working Time	apply within 2 hrs.
Contact Time	12 hours maximum
Final Cure	28 days

Cured

HDT ASTM D-648	>120°F
Compressive Strength ASTM C-109	4000 psi @ 4 day 7500 psi @ 28 days
Slant Shear Bond Strength ASTM C-882 with 0-12 hours open time	>2,000 psi @ 14 days
Splitting Tensile Strength ASTM C-496	600 psi.
Flexural Strength ASTM C-348	1,260 psi. @ 28 days
Water Absorption, 24 hrs.	.20

All values approximate - will vary with temperature and humidity.

Packaging Yield

SurePoxy HM 12 is a three-component unit that consists of a carton containing Components A & B and an additional 45 lb. bag of Component C powder. This mixture yields approximately 3.5 gallons after mixing. When applied at 20 mils thick (80 ft²/gal.), one unit will cover about 280 ft²

Storage/Shelf Life

Store in unopened cans at 60°-80°F. If allowed to freeze, discard. Shelf life is 1 year when properly stored.

Directions

Surface Preparation

Concrete -Surface must be clean and sound. It may be dry or damp but free of standing water. Remove laitance, and all foreign matter as per ASTM D-4258 and D-4259. Water-blasting followed by shotblasting is the preferred method of preparation, to provide a fractured aggregate profile of at least 1/8" equal to texture #4-#5 from ICRI. Also satisfactory are sandblasting or shotblasting individually. Acid etching according to ASTM D-4260 with Kaufman Products Concrete Floor Etch or 15-20% muriatic acid solution can be used as an alternative. Wash acid and loose mortar off with high-pressure water until slush is removed. Test with litmus paper to be sure acid is removed. Final rinse with 1% ammonia solution is beneficial for final rinsing after acid. Expansion/control joints, joint sealants, floor drains and floor termination joints require special attention. SurePoxy HM 12 will not usually adhere to sealant joint products. Test first.

Steel - Sandblast to white metal. Follow guidelines from the Steel Structures Painting Counsel (SSPC).

Proportioning/Mixing

Condition material to 65-80°F before using. Stir each liquid component well and empty contents into a mixing pail. Mix the two components in the pail with a low speed (400-600 rpm) drill for at least 1 minute, add then the powder, and mix for 1-2 more minutes. Use the entire unit at one time, do not mix partial units.

Application

Bonding fresh concrete to hardened concrete:

Remove all foreign matter, including curing compounds or form release agents. All unsound concrete should be removed. The surface must be prepared mechanically giving a surface profile of a minimum of 1/8" exposing the coarse aggregate of the concrete. The surface should be saturated surface-dry without any standing water. Apply SurePoxy HM 12 to hardened concrete at 80 ft²/gl. (20 mils) with a sprayer or broom after mixing. Apply fresh concrete up to 12 hours at 70°F after application of SurePoxy HM 12. If SurePoxy HM 12 loses its tackiness due to suction into the substrate or very high temperatures, high winds, etc., apply an additional coat, while first coat is still slightly tacky

For corrosion protection of steel: Apply by brush or sprayer at approximately 80 ft²/gl. (20 mils). Be sure to coat the exposed steel completely. Allow coating

to dry tack free (2-6 hours @75°) then apply a second coat, at the same coverage rate. Total film thickness should be a minimum of 40 mils. Place the fresh concrete or mortar over SurePoxy HM 12 within the maximum allowable time.

Polymer modified mortars- Add equal amounts of mixed HM 12 and water to modify cement mortars.

Shotcrete- Wait a minimum of 6 hours after SurePoxy HM 12 application. Early shotcreting may dislodge the epoxy.

Clean Up

Clean up with soap and water. Dried material must be removed mechanically.

Precautions

Do not thin SurePoxy HM 12. For best results place when temperatures are between 50-80°F. Use between 40°F-95°F. Pot life will vary due to different temperatures. The contractor shall use the test method prescribed in ACI 503R to determine that the preparation produced a surface capable of providing a tensile bond-strength greater than 250 psi. Not recommended for use with expansive grouts. Read Material Safety Data before using. Please refer to the *General Epoxy Instructions* for complete details on proper application during cold and hot weather.