SPECIALTY CONSTRUCTION PRODUCTS

Safe-Cure® & Seal EPX

Water Based Epoxy Compound
Curing, Sealing, Priming, Coating

P R O D U C T D A T A

DESCRIPTION

ChemMasters' **Safe-Cure & Seal EPX** is a low VOC two component, water based epoxy, priming, curing, coating, and sealing compound for concrete. **Safe-Cure & Seal EPX** is available in clear, pigmented, or white primer formulations.

USES

- Use on interior or exterior, horizontal or vertical, concrete surfaces
- Curing for fresh concrete to provide effective hydration of the cement to ASTM C1315 standards
- Effective sealer/primer for concrete scheduled to receive epoxy or urethane topcoats
- High performance coating for formed and poured, tilt wall, or precast structures
- Curing compound and epoxy primer for **Duraguard 310 CRU** in D.O.T. concrete sealing applications including bridge, median, and sound barrier surfaces.

ADVANTAGES

- Cures, seals, and primes in a single economical application
- May be top coated with pigmented **Safe-Cure & Seal EPX** or **Duraguard 310 CRU**
- Eliminates costly chemical or mechanical removal of curing membrane prior to application of polymer coatings
- Excellent resistance to chloride ion penetration yet exhibits high level of moisture vapor transmission when fully cured
- Significantly improved wear and chemical resistance over standard resin or acrylic curing and sealing compounds
- Exceptional tensile and shear bond strengths for improved durability

APPLICABLE STANDARDS

- ASTM C-309, Type I* Class A & B Standard Specification for Liquid Membrane Forming Compounds for Curing Concrete
- ASTM C-1315 Type I*, Class B, Standard Specification for Liquid Membrane-Forming Compounds for Curing and Sealing Concrete
- AASHTO M-148, Type 1* Class A & B
- Complies with National Volatile Organic Compound (VOC) Emission Standards for Architectural Coatings, Federal EPA Regulation 40 CFR Part 59
- Ohio D.O.T. Material Specification 705.23A Item 512.03.
- Available in clear or any Federal Standard color
- Type II when pigmented white

TECHNICAL DATA

Packaging of 4 gallon unit / Part Number		
Clear Part A & B	0.8 gal in 1 gal pail (A) 3.2 gal in 5 gal pail (B)	F5000.05
White Primer Part A & B	0.8 gal in 1 gal pail (A) 3.2 gal in 5 gal pail (B)	F5005.05

Physical Properties	
Solids: Colors Clear	 38 to 45% 31%
Weight	9 lbs/gal (1.07 kg/L)
VOC content	< 50 g/L
Flash Point	>200°F
Pot Life	30 minutes
ASTM C 1315 Moisture Loss	<0.40 g/cm^2 in 72 hrs
Abrasion Resistance Taber 1kg//500 cycles/CS 10 wheels Taber 1kg//1000 cycles/CS 10 wheels	 18.1 mg 33.1 mg
Tensile Bond Strength (7 days): Fresh concrete Etched or blasted concrete	 215 to 220 psi (1.4 to 1.5 MPa) 350 to 450 psi (2.4 to 3.1 MPa)
ASTM C882 Shear Bond Strength (7 days)	1000 psi (21.4 MPa)

Drying Time @ 70°F (21°C) with 50% R.H.	
Dry to _ condition:	**Hours**
Dry	4 (longer when humidity is high)

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300 EDWARDS STREET • MADISON, OHIO 44057-3112 (440) 428-2105 • FAX (440) 428-7091 • ORDER LINE: (800) 486-7866 www.chemmasters.net

Aug 2020

Estimating Guide * (Coverage Rates Vary with Surface Texture and Porosity. For DOT jobs check specific requirements)		
Condition	**ft^2/gallon**	**m^2/liter**
Curing & Sealing Fresh Concrete	200	5
Priming & Coating Cured Concrete	200	5

DIRECTIONS

Mixing: Safe-Cure & Seal EPX must be mixed before application. **Add entire contents of Part A into the 5 gal pail of Part B.** Mix for 3 minutes with a drill at low speed fitted with a mixing blade to minimize the risk of incorporating excess air. (Pigmented formulations must have a uniform color with no streaks). Stop mixing, allow epoxy to rest for 5 minutes. A noticeable fattening or thickening of the material will be evident. Remix for one minute just prior to use. Use within 30 minutes.

Application: A medium nap roller is preferred for surfaces exhibiting an enlarged pore structure, numerous bug holes, honey combs, or voids. Apply evenly leaving no pinholes or gaps but avoid puddles.

Safe-Cure & Seal EPX may also be sprayed using a Chapin Sprayer with a 0.30 to 0.40" fan tip, GRACO Gmax 5900 HD 1 gpm Blue HD Texture Gun using a fan tip with minimum tip size 0.017 GHD, and 2,000 psi, or comparable. Hold sprayer tip 6 to 8 in (15 to 20 cm) from the concrete surface. Apply uniformly leaving no pinholes or gaps. Avoid over applying or forming puddles.

When applying **Safe-Cure & Seal EPX** on horizontal surfaces apply after all bleed water has dissipated and application will not mar surface. When curing slip formed concrete, apply immediately following slip form machine.

When sealing or priming steel trowel or previously cured concrete, the surface must be cleaned, acid etched, and thoroughly rinsed prior to applying **Safe-Cure & Seal EPX .** Exterior concrete must be brushed blasted or high pressure washed before application. The surface may be damp when the epoxy is applied but there should be no puddles.

Drying and Re-coating: Safe-Cure & Seal EPX dries to the touch in 4 hours @ 70°F (21°C) and 50% relative humidity. Lower temperatures and higher humidity will take longer to dry. Environmental conditions affect curing and drying time. The surface may be recoated when it is tack free. Recoating must be completed within 7 days. After 7 days additional surface preparation will be required. Contact ChemMasters' Technical Service Department for details.

Low temperature and high humidity slow the drying process. **Safe-Cure & Seal EPX** must be tack free before applying a second coat. Ensure there are no contaminants that could interfere with the adhesion on the surface.

CLEANUP

Clean tools and equipment used to apply **Safe-Cure & Seal EPX** with warm water and detergent immediately after use.

LIMITATIONS

- **Safe-Cure & Seal EPX** must be applied within 1.5 hrs of finishing operation when used as a curing compound
- State D.O.T. specifications pertaining to coverage rates supersede those recommended by ChemMasters. Consult project specifications or proposal notes for state requirements
- **Safe-Cure & Seal EPX** is not to be used as a bond breaker for tilt wall construction.
- For optimum results, condition material to 60 to 75°F (15 to 24°C) prior to mixing. This is critical when temperature is above 90°F (32°C).
- **Safe-Cure & Seal EPX** is not intended for use when concrete surface temperatures are below 50°F (10°C)
- Increasing mixed mass (volume) decreases working time (pot life)

STORAGE

Store tightly closed containers between 50 and 100°F (10 and 38°C) in unopened containers out of direct sunlight and precipitation. **Do not freeze!** Shelf life of properly stored material is two years from date of manufacture.

PRECAUTIONS:

Part A: WARNING: Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Toxic to aquatic life with long lasting effects. Precautionary Statements: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands and skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well ventilated area Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Part B: WARNING: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Precautionary Statements: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands and skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

Consult the Safety data sheet for full hazard information.