



# DC540 Moisture Block

## PREPARE

### PRODUCT DESCRIPTION:

EPIC DC540 mitigates existing moisture vapor emission in substrates which exhibit readings as high as 95% RH per ASTM F2170. Product should be applied prior to application of vinyl, cement leveling products, terrazzo, wood, carpet, polymeric coating systems and other floor coverings or toppings. EPIC DC540 meets ASTM F3010 product requirements for vapor permeability at the recommended thickness. For interior use. Exhibits low to no odor.

CURE SCHEDULE (70 Degrees F)	
Pot Life (150 gram mass)	28-38 Minutes
Tack Free (Dry to Touch)	6-10 Hours
Recoat or Topcoat	12-16 Hours
Full Cure	3-7 Days
Application Temperature: 50-90 degrees F with relative humidity below 85%	

**PRODUCT STORAGE:** Store product at 65°F to 85°F for at least 48 hours prior to use.

**SOLIDS BY WEIGHT:** 100%

**SOLIDS BY VOLUME:** 100%

**VOLATILE ORGANIC CONTENT:** Zero

**COLOR:** Clear

**RECOMMENDED FILM THICKNESS:** 17 mils

**COVERAGE PER GALLON:** 95 square feet per gallon @ 17 mils

**PACKAGING INFORMATION:** 3 gallon and 15 gallon kits (volume approx.)

**MIX RATIO:**

9.25 pounds (1 Gallon) part A to 4.15 pounds (0.50 gallons) part B (volumes approx.)

**SHELF LIFE:** 1 year in unopened containers

**ADHESION:** 350 psi @ elcometer (concrete failure, no delamination)

**VISCOSITY:** Mixed= 500-1000 cps (typical)

**DOT CLASSIFICATIONS:**

Part A "not regulated"

Part B "CORROSIVE LIQUID N.O.S., 8, UN1760, PGIII"

**HARDNESS:**

Shore D= 75-80

**TOPCOAT:** Various topcoat products and systems can be used.

**SURFACE PREPARATION:** Do not apply over Gypsum compounds or light weight concrete. The concrete must meet acceptable industry standards as defined in ACI committee 201 report "Guide to Durable Concrete" Perform Vapor testing to verify that the vapor pressure is below 95% per ASTM F2170 or 20 lb/24hr/1000 ft<sup>2</sup> per ASTM F1869. For accuracy, perform tests after HVAC has been turned on in area of use for at least one week prior to testing. For moisture testing, at least one test shall be performed for each 1000 square feet of floor surface to be treated. All dirt, foreign contaminants, sealing compounds, oil, solvent, paint, wax, grease, residual adhesives, curing compounds, silicate penetrating compounds, salts, efflorescence, mold, mildew, laitance or any other foreign materials that can affect the adhesion must be removed before surface preparation to assure a trouble free bond to the substrate. Surface depressions or surface irregularities shall be filled smooth and surface cracks, grooves or other non-moving control joints shall be filled before application of the membrane and after the surface preparation has been performed. Cracks and voids should be cleaned out using a wire brush and vacuumed. Narrow cracks may need to be widened to a ¼ inch depth and width with an angle grinder and the sides should be primed with the vapor barrier coating before filling by troweling a mix of the mixed vapor barrier liquids and a thickening agent, (making a paste like consistency) into the cracks. Cracks that are very narrow, can be flooded with the vapor barrier coating when the material is applied. The most suitable surface preparation would be a shot blast to provide a suitable profile to a minimum CSP #3 per ICRI Guidelines. The concrete substrate shall be smooth to prevent irregularities in application thicknesses. Allow concrete substrate to dry for 16-24 hours after surface preparation. We recommend that a mockup installation for the moisture mitigation system of a minimum 100 ft<sup>2</sup> using the same methods and equipment that will be used for the entire installation be applied and tested for tensile bond strength to the concrete following test method D7234. The results must equal or exceed 200 psi with failure in the concrete before proceeding. For applications over 5,000 square feet, core samples and additional testing can be evaluated, such as X-ray diffraction mineralogical analysis, infrared spectroscopy analysis, ion chromatography analysis and petrographic analysis. These additional tests can give an indication as to the condition of the concrete and degree of contamination (if any), before installation. After surface preparation and while applying the membrane, coat the vertical edges of the clean and sound expansion joint and allow to dry prior to installing the expansion joint material. All dynamic, moving joints and cracks must be honored through the entire flooring system applied and filled with an elastomeric material that is suited for the general conditions of use. The joint must be installed so that the joint runs through the entire flooring system to be applied. Use of a backer rod material is employed in joints such that adequate depth in the joint is maintained for the applied joint filling. Inadequate surface preparation can result in leaving contaminants resulting in pin holes, bubbles, fish eyes or other deficiencies that can cause disbonding or coating failure.

**PRODUCT MIXING:** This product has a mix ratio of 9.25# part A to 4.15# part B. Standard packages are in pre-measured kits and should be mixed as supplied in the kit. We highly recommend that the kits not be broken down unless suitable weighing equipment is available. Mix each individual component before using. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. Avoid whipping air into the liquids. After mixing, transfer the mixed material to another pail (the transfer pail) and again remix before applying to the concrete substrate. Improper mixing may result in product failure.

**PRODUCT APPLICATION:** The mixed material can be applied by brush or roller. However, the material can also be applied by a suitable serrated squeegee and then back rolled as long as the appropriate thickness recommendations are maintained. When applying by serrated squeegee, back roll the material at a right angle to the direction of the squeegee application. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process. When rolling out the product, it is best to roll out the product in one direction and then back roll the material in the opposite direction to make sure it is worked into the concrete well. If concrete conditions or over aggressive mixing causes air entrapment, then an air release roller tool should be used prior to the coating tacking off to remove the air entrapped in the coating. When the mixed material is applied to the concrete surface, pin holes or voids may develop when air is displaced (outgassing). If voids or pinholes occur, re-application to remove them must be undertaken Grind these areas and clean off residue; make sure the surface is dry and recoat. The XL Moisture Block must be applied to form a continuous monolithic void free application. Thinner applications than recommended may result in insufficient moisture vapor protection.

**COATING OR COVERING DC540 Moisture Block:** For proper adhesion, use a product or primer suitable for application over a non-porous surface when applying a coating or other surface product on top of DC540. . The application of the minimum 100 ft<sup>2</sup> mock up using the same methods and equipment that will be used for the entire installation should be thoroughly inspected to determine that product compatibility and adhesion of the entire system is sufficient for the intended use of the area.

Do not apply any coatings, overlays, or other surfacing before the DC540 is properly set up; typically 12-16 hours at 70°F. Keep in mind that cooler temperatures or a colder substrate might need additional curing time. Usually, the degree of cure is sufficient when you can firmly press down on the coating with your thumb and leave no marking. The maximum recoat window for the moisture vapor coating is 48 hours.

**CLEANUP:** Use xylol

**FLOOR CLEANING:** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique.

**RESTRICTIONS:** Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle. Dependent on actual complete system application, surface may be slippery, especially when wet or contaminated; keep surface clean and dry.

**LIMITATIONS:**

- Substrate temperatures must be 5°F above the dew point.
- For best results, apply with a high quality roller.
- All new concrete must be cured for at least 10 days prior to application with a minimum compressive strength of 3,500 psi and a minimum tensile strength of 200 psi.
- Testing must be performed to confirm a moisture vapor emission rate below 95% RH per ASTM F2170 or 20 lb/24hr/1000 ft<sup>2</sup> per ASTM F1869.
- Surface must be durable, clean, free of laitance with a surface profile minimum of CSP3 as per the International Concrete Repair Institute.
- Do not expose this product to water until fully cured. Product is not suitable for preventing hydrostatic or osmotic water conditions.
- Product will not prevent failures from insufficient surface preparation, improper applications, alkali silica reaction (ASR), ionic compounds or soluble salts in the concrete. Manufacturer is not responsible for failures caused by cracks and pinholes or damage caused by use. Cracks and joints are not covered by any warranty.
- Product is not warranted for any products not recommended by or manufactured or approved by Epic Building Products, LLC.
- In the event of any breach of warranty, customer's sole and exclusive remedy shall be replacement or repair of materials actually damaged (i.e., affected areas only) No warrant shall cover any application that does not follow the surface preparation, mixing, application and covering recommendations and procedures.
- Manufacturer does not warrant penetration and bond where cores are not tested unless and until project owner submits cores and lab establishes that no impediment to bond or penetration is or was present.
- Physical properties are typical values and not specifications.

**NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY**

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