



RIO-COAT EVS

Moisture Mitigation System

PRODUCT DESCRIPTION

RIO-COAT EVS is a two-part 100% solid epoxy moisture mitigation system. It is a moisture tolerant and VOC-Compliant product that limits alkalinity and the transmission of moisture, odor and other elements through concrete slabs. RIO-COAT EVS is compatible with most flooring adhesives and cementitious underlayments. RIO-COAT EVS features a rapid curing time for faster job completion. It allows the direct bond of most industrial coatings, floor leveling products and most adhesive systems.

TYPICAL PROPERTIES

Composition:	100% solids epoxy
Colors:	Clear
Volume Solids:	100%
Shelf Life:	2 years when stored properly
VOC Content:	Zero
Pot Life:	15-25 min at 75°F (24°C)
Accept Foot Traffic:	73°F (23°C) 4-6 hours
Mix Ratio:	1A:1B by volume
Yield:	15 mils or 23 mils per gallon depending on RH
Storage:	Keep product stored in unopened container. Keep away from extreme heat or freeze conditions and between the temperatures of 60°F and 75°F.

The data shown above reflects typical results based on laboratory testing under controlled conditions. Variations from the data shown may result. Test methods are modified where applicable.

BENEFITS

- Typically only one coat requirement
- Fast cure
- Same day cover
- VOC-Compliant
- Compatible with most floor covering systems
- Direct bond of floor coverings and toppings
- Superior bond to dry or damp surfaces
- 0.06 perm rating

PACKAGING & COVERAGE

Unit Size Kits: 1:1 by volume

- 10 Gal Kit
(Part A (5 Gal), Part B (5 Gal))

Moisture Readings

RH or Calcium Chloride **LESS** than 85% or 15 pounds per 1000ft² = 15 mils or 100 square feet per gallon of EVS

RH or Calcium Chloride **ABOVE** 85% or 15 pounds per 1000ft² = 23 mils or 70 ft per gallon of EVS

INSTALLATION STEPS

Before you begin:

EMISSION TESTING

All areas to be treated must be tested in accordance with ASTM F-2170 (Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes). Anhydrous Calcium Chloride tests (ASTM F-1869-11) may be used only where HVAC is on 24x7 at least one week before and during tests and only by approval of RIO Technical Services. New concrete: Testing sample cores of concrete slab for presence of sealers or other bond breakers is strongly recommended. To obtain warranty, fill out warranty application. Floor area, location of tests, ambient temperatures and humidities during tests should be recorded and mapped, with at least one test performed for each 1000 sq. ft. of floor surface to be treated.

Preparation

Concrete

All surface must be clean, sound, solid, open pore and absorptive. Slab must be at least 4" thick and any distinct layer at least 2" thick to be considered structurally sound. Repair and leveling layers containing latex or other components generally prevent absorption and proper bond and should be removed. Surface should be mechanically prepared to achieve a surface profile of ICRI CSP 3-5 (Int. Concrete Repair Inst.) Bead or shotblast strongly preferred. Acid etching is not permitted, nor chemical remediation of any adhesive residues. Surface must be clean, completely free of dust, dirt, paint, sealer or any contaminant which might interfere with penetration or bond. Do not apply to floors which have sealers or bond breakers applied unless completely removed. Quick tests to help determine clean, open and absorptive concrete use water drops. If dime size water drops placed at several locations on prepared floor do not readily absorb into concrete within 30 seconds or beads up, surface is not sufficiently absorptive. In all cases, thorough vacuuming (with dust containment filter) is needed before application. Cleaning with pressure washer may be advisable in some cases. Leveling should be done on top of RIO-COAT EVS with suitable repair materials such as SKIMFLOW ES or SKIMCRETE XL.

Cores

Cansto strongly recommends cores samples be taken and lab tested for penetration of the slab by any sealers, oils, adhesives, or other bond breakers. We do not warranty Alkali Silica Reaction and other problems. Cores through slab can indicate absence or failure of moisture barrier or presence of aggregate between membrane and slab. Cansto 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 and penetration was present.

Joints

Expansion (cold or construction) joints should be left intact. RIO-COAT EVS is not warranted against structural movement at expansion joints. To help reduce moisture emissions through expansion joints, coat the walls and bottom of the cleaned joint with RIO-COAT EVS. Once allowed to dry, an expansion joint cover or an elastomeric sealant may be used. For concrete slabs over 6 months old, sawcut (control) joints and cracks should be filled by pouring RIO-COAT EVS full depth or to 3/4 of joint depth. If filling to 3/4 depth pour silica quartz into RIO-COAT EVS to create a mortar. Sweep away excess sand and proceed with RIO-COAT EVS installation.

Mixing

Use chemical resistant gloves and goggles when mixing or applying RIO-COAT EVS. RIO-COAT EVS is packaged in 2 Parts: Part A and B, separate pails. Part A and Part B are supplied in the appropriate mix ratio (50:50 by weight). You will need to supply a clean mixing container and use it as your Mixing Pail. Pour Part A (Resin) into mixing pail first, then add in Part B (Hardener). Mix thoroughly. Mixing is accomplished mechanically with an appropriate mix paddle. Mix for 4-5 minutes at about 300 rpm to produce a streak free, homogenous product. Care must be taken to mix all the product and avoid any action that might entrap air such as high speed drill mixing. DO NOT THIN the product.

Application

Slab (surface) and air temperature must be 55°F or greater. Product must be kept between 60°F and 75°F at time of mixing. Colder or warmer temperatures can significantly retard or advance working and cure times respectively. Tools needed: 3/16 V-Notch Squeegee, short nap synthetic roller and frame. Mark with tape or otherwise measure out the area of floor intended to be covered by the container or containers mixed. Film gauges are recommended to check the thickness of the wet material. Overall coverage rate of 70 sf/gallon must be maintained. Very rough or porous concrete may require heavier application rate. Adjust the procedure to achieve the recommended coverage rate. Pour a strip of RIO-COAT EVS across the surface. Move with a squeegee. Back roll to achieve a uniform coverage and smoother surface.

Curing

Before covering RIO-COAT EVS, be sure to check temperature, relative humidity and dew point. Proceed only when in safe area.

Traffic

RIO-COAT EVS may be exposed to foot traffic once it has completely hardened. If the product becomes wet, it may become slippery. When exposed to traffic, thoroughly clean with soap and water and allow to dry before proceeding.

Covering

Must cover within 3 days. First, thoroughly check the coating for any fish eyes or pinholes which would be a weak point in the membrane. Grind these areas and clean off residue. Make sure the surface is dry and re-coat. Many latex based adhesives require a leveling layer to absorb moisture from adhesive. Cansto recommends installing a protective leveler over RIO-COAT EVS to protect from disturbance if the floor covering is ever changed. Most cement and gypsum based underlayments and toppings, epoxy coatings, terrazzo and floor coverings should be applied within the 3 day recoat time. Many adhesives and materials will bond directly over RIO-COAT EVS where required.

Underlayment / Toppings

Treat the substrate as non-porous, using the appropriate primer for self-leveling products such as Dependable's SKIMFLOW ES, coat with PRIMER SL, and follow the product instructions. Trowel applied patching materials like SKIMCRETE XL may be applied directly to the coating.

Floor Covering

Floor covering adhesives that are applied directly to the membrane should follow instructions for bonding to a non-porous substrate. The adhesive will require a longer tack time. Follow the product information for installation times. Many floor covering systems require a smooth, level substrate.

Clean-Up

Clean tools and equipment with xylene immediately after using. Wash hands and skin with soap or industrial hand cleaner, not solvent. Cured material must be removed mechanically.

Curing

- Not a wear surface or topping
- Do not apply over a slab while experiencing hydraulic pressure.
- Do not apply over existing coatings, sealers or floor coverings.
- Do not apply where either slab or air temperature falls below 50°F (10°C) at or within 72 hours after installation.
- Do not use where temperature will exceed 125°F.
- Do not apply to concrete slabs with less than 3500 psi compressive strength. (Consult RIO Technical Services).
- Protect the area to be treated from strong sunlight, wind or drafts.
- Acid Etching should not be used as a method of preparation.
- Do not apply to new concrete slabs until at least 7 days old.
- Do not apply where RIO-COAT EVS will receive unprotected exposure to sunlight or UV radiation.
- Terrazzo strips may move and may corrode, therefore RIO-COAT EVS is not warranted over terrazzo strips.
- Can NOT be sprayed.
- DO NOT FREEZE.

Safety

This product is intended to be installed only by professionals. Keep away from children, as materials are hazardous and may cause harm. Workers should wear gloves, eye wear and other protective equipment when installing this product. Consult RIO is necessary before installing this product.

Limitations

All concrete slabs intended to receive this product must be moisture tested while in planning and estimating stages, the same as any other impermeable floor coating. If slabs fail to pass moisture inspection, RIO-COAT EVS should NOT be installed without appropriate primers. Ask RIO Technical Service for details.