Eco-MVR™

Moisture Vapor Reducer

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Division 9

Section 09965 - Abrasion Resistant Coatings

PART 1 - GENERAL

1.01 Summary

A. A fluid-applied uniquely-modified epoxy moisture mitigation system for green concrete. It is designed to be used as an above and below grade vapor retarder that is placed on the negative side (between the concrete slab and the impervious coating or surfacing) of the concrete substrate. It will withstand moisture vapor emission rates (MVER) of 10 pounds (4.5 kilograms) per 1,000 square feet (92.9 square meters) in 24 hours when used over concrete that is a minimum of 14-days and a maximum of one-year old. Low VOC (2 g/L). (Complies with SCAQMD VOC regulations. LEED credits available.)

1.02 Performance Requirements

A. See manufacturer's technical data bulletin for specific material, cured coatings and a complete list of chemical resistant properties.

1. Eco-MVR must be coated with a Tennant epoxy. A topcoat of Tennant urethane is strongly recommended for increased wearability. (See appropriate product bulletin for chemical resistance ratings.)

1.03 Submittals

A. Product Data: Submit manufacturer's product data, including physical properties, chemical resistance, surface preparation and application instructions.

B. Submit list of five projects similar in nature, which have been installed by applicator during the last five years, identified with project name, location, name of owner's representative, their phone number and date.

C. Submit manufacturer's standard warranty and applicator's warranty.

1.04 Quality Assurance

A. Applicator Qualifications:

1. A minimum of three years' experience in the application of coatings or resurfacers to concrete floors.
2. A minimum of ten jobs or 1,000,000 square feet (92,903 m^2) of successful applications.

B. Pre-Application Meeting: Convene a pre-application meeting 2 weeks before the start of application of floor coating system. Require attendance of parties directly affecting work of this section, including the Contractor, Architect, Applicator and Manufacturer's Representative. Review the surface preparation, application, cleaning, protection and coordination with other work.

1.05 Delivery, Storage and Handling

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Store materials in accordance with manufacturer's instructions.

1. Store materials in dry, enclosed area with adequate protection from moisture.
2. Keep containers sealed until ready for use.
3. Storage Temperature: 65°F (18°C) and 90°F (32°C).

1.06 Warranty

A. Written manufacturer's warranty covering materials only. Applicator to provide application warranty.

PART 2 - PRODUCTS

2.01 Materials

A. Coating: Tennant Eco-MVR - Moisture Vapor Reducer. A two-component epoxy.
   1. Volatile Organic Compound (VOC), ASTM D3960
      1. .02 lb/gal or 2 g/L
   2. Tensile Strength, ASTM D2370
      1. 4,200 psi or 28.958 MPa
   3. Tensile Elongation, ASTM D638
      1. 2.7%

B. Colorant: Tennant Colorants CANNOT be added to Eco-MVR.

C. Cleaners and Related Products:
   1. Industrial Grease Remover: Tennant Detergent
      1. Tennant detergents are available in a range of formulations which remove a variety of soilage.
   2. Cleaner/Remover: Tennant 9960.
      1. Some curing membranes may be removed with Tennant 9960.

PART 3 - EXECUTION

3.01 Examination

A. Examine concrete surface to receive floor coating system. Notify the Architect if surface is not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

B. Allow concrete substrate to cure a minimum of 14 days.

C. **CHECK FOR MOISTURE:** Concrete moisture testing must occur. Calcium chloride testing per ASTM F1869 is recommended. Readings must not be >10 pounds (4.5 kilograms) per 1,000 square feet (92.9 square meters) in 24 hours on the calcium chloride test. Contact Tennant for recommendations if fully cured concrete displays a moisture emission level greater than 10 lbs (4.5 kgs) per 1,000 ft^2 (929 m^2) in 24 hours. Test methods can be purchased at www.astm.org, see ASTM F1869 or follow instructions from the suppliers of these tests.

   NOTE: Although testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or the vapor barrier is not functioning properly and/or you suspect you may have concrete contamination from oils, chemical spills or excessive salts.

3.02 Preparation

A. Prepare surface in accordance with manufacturer's instructions.
   1. Cleaning: Scrub with Tennant detergent and rinse with clean water to remove surface dirt, grease and oil.
   2. Remove coating or membrane for existing concrete. Shot blast to a profile of CSP4 (International Concrete Repair Institute).
   3. Sweep or vacuum concrete surface.

3.03 Application

A. Apply floor coating system in accordance with manufacturer's instructions.
   1. Assemble squeegees and rollers; clean rollers to remove residual lint.
   2. Primer: Eco-MVR - Moisture Vapor Reducer.
      1. Mix components together.
      2. Mix only enough material which can be applied within 25 minutes.
      3. Apply Eco-MVR at the rate of 225 ft^2/gal (21 m^2/3.79 L).
      4. Eco-MVR must be coated with a Tennant epoxy within 36 hours. A topcoat of Tennant urethane is strongly recommended for increased wearability.

3.04 Protection

A. Close job site to traffic for a period of 24 hours after coating application at 75°F (24°C) and 50% relative humidity.

END OF SECTION