**SECTION 09 05 61.13**

**MOISTURE VAPOR EMISSION CONTROL**

1. GENERAL
	* + 1. SECTION INCLUDES
				1. Moisture vapor emission control system for interior concrete slabs in preparation of floor covering installation, includes:

Moisture vapor emission control solution.

Bond promoter.

* + - 1. RELATED SECTIONS
				1. Section 03060 – Concrete Moisture Vapor Reduction Admixture.
				2. Section 03300 – Cast-in-Place Concrete.
				3. Section 07270 – Vapor Retarders.
				4. Division 9 Sections for floor coverings applied to concrete substrates.
			2. REFERENCES
				1. ASTM International (ASTM):

ASTM D7234 - Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers

ASTM F 710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

ASTM F3191 - Standard Practice for Field Determination of Substrate Water Absorption (Porosity) for Substrates to Receive Resilient Flooring

* + - * 1. International Concrete Repair Institute (ICRI)

Guide 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays and Concrete Repair.

* + - * 1. U.S. Green Building Council (USGBC)

Leadership in Energy and Environmental Design (LEED).

* + - 1. DEFINITIONS
				1. MVE: Moisture vapor emission.
				2. MVER: Moisture vapor emission rate.
			2. SUBMITTALS
				1. Submit under provisioins of Section 01300.
				2. Product Data

Manufacturer's data sheets on each product to be used.

Preparation instructions and recommendations.

Storage and handling requirements and recommendations.

Typical installation methods.

* + - * 1. Sustainable Design Submittals:

Product Data: Indicating VOC content.

Laboratory Test Reports: Indicating compliance with low-emitting material requirements.

* + - * 1. Quality Assurance Submittals:

Qualification Data: For Applicator.

Product Test Reports: For MVE-control system, indicating compliance with requirements.

Field quality-control reports.

* + - 1. QUALITY ASSURANCE
				1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section and employs technical-support personnel who are available for product training.
				2. Installer Qualifications: Company specializing in performing Work of this section and trained and approved by the manufacturer.
				3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
				4. Mock-Up:
			2. DELIVERY, STORAGE, AND HANDLING
				1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
			3. PROJECT CONDITIONS
				1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
1. PRODUCTS
	* + 1. MANUFACTURERS
				1. Manufacturer: ISE LOGIK INDUSTRIES, 14231 Seaway Road, Suite 1003, Gulfport, MS 39503. Telephone: 877-549-5159; Email: dpseland@iselogik.com; decraft@iselogik.com. www.iselogik.com.
				2. Substitutions: Not permitted.
				3. Requests for substitutions will be considered in accordance with provisions of Section 01600.
			2. PERFORMANCE REQUIREMENTS
				1. Flooring products shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
			3. MVE-CONTROL SYSTEMS
				1. Moisture Vapor Emission (MVE) Control Solution: A no limit moisture vapor emission control solution:

Basis of Design: MVEC-710; as manufactured by ISE Logik Industries, Inc.

Approved for use with all flooring systems and types.

No moisture testing required prior to use.

* + - * 1. Bond Promoter: A one-part next generation bond promoter surface texturizer, encapsulator, and pH barrier.

Basis of Design: MVBP-600; as manufactured by ISE Logik Industries, Inc.

Designed for use over MVEC 710 moisture vapor emission control system.

Evidences long-term resistance to water and humidity.

Resistant to solvents, chemicals, and corrosion.

1. EXECUTION
	* + 1. EXAMINATION
				1. Do not begin installation until substrates have been properly prepared.
				2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
				3. Verify that concrete has achieved a minimum of 3000 psi, or 80 percent of design strength, whichever is greater.
				4. Verify that no hydrostatic pressure exists.
			2. PREPARATION
				1. Prepare according to manufacturer's written instructions, industry guidelines, and as follows:

Clean concrete substrates of foreign substances in accordance with ASTM F710 to include, but not limited to, adhesive residue, floor sealers, curing compounds, wall plaster and joint compound, cleaning compounds, wax, oil, dirt, or other substances that could interfere with or block the absorption of product into the concrete surface.

Absorption Testing: Comply with ASTM F3191 to verify an absorptive/porous concrete surface. If substrate does not comply, abrade concrete surface to a concrete surface profile (CSP) complying with ICRI 310.2R CSP 1 to 3 to ensure an absorptive/porous substrate per ASTM F3191.

Moisture Testing: Not required.

pH Testing: Not required.

Bond Testing: Apply system to 100 sq. ft. (9.29 sq. m.) of prepared concrete substrate and test according to ASTM D7234. Proceed with application when bond strength is greater than 200 psi (1.38 MPa) with failure of concrete substrate.

* + - * 1. Fill and seal cracks with polymer-fortified cementitious patching and leveling compound, installed according to manufacturer's instructions. Do not fill expansion joints or other moving joints.
				2. Protect adjacent surfaces during application.
			1. INSTALLATION
				1. Install in accordance with manufacturer's instructions, approved submittals and in proper relationship with adjacent construction.

Do not overapply or allow puddles. Remove excess material with manufacturer's recommended trowel to ensure even distribution.

* + - * 1. Cure MVE-control solution a minimum of 8 hours, and in accordance with manufacturer's instructions.
				2. After curing, repair surface defects, such as pinholes or bubbles with additional MVE-control solution.
				3. Apply bond promoter to surface of MVE-control solution: Apply according to manufacturer's instructions and recommended spreading rate.

Roll and cross roll to provide uniform, monolithic surface.

Do not overapply or allow puddles.

Cure for a minimum of 1 hour, and in accordance with manufacturer's instructions prior to applying flooring adhesives.

* + - 1. FIELD QUALITY CONTROL
				1. Inspect applied system for non-conforming work.
			2. CLEANING
				1. Immediately clean MVE-control system from glass and metal with soap and water, and dry.
			3. PROTECTION
				1. Protect MVE-control system from staining, laitance, and contamination before flooring installation.
				2. Do not allow subsequent testing for flooring installation to compromise MVE-control system.

END OF SECTION