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1. **Design Criteria:**

- a. This section refers to exterior membrane coatings for pedestrian areas and vehicle parking areas. Penetrating concrete sealers are not included here. Epoxy flooring is included in the resinous flooring section.
- b. Temperature limitations during installation shall be considered during specification of traffic coatings
- c. The use of low or no-VOC products is preferred
  - i. Low or no-VOC products are not inherently odor-free.
- d. When odors are expected during installation, the contractor shall notify the UVM project manager as soon as possible but not later than 7 days in advance, so UVM can protect air intake systems of nearby buildings to avoid distribution of the odors throughout the interiors of those buildings, or so that work can be scheduled to minimize odors during occupancy of nearby buildings.
  - i. Air quality at nearby air intakes may be monitored during installation of odor producing coatings (monitoring will be by UVM). If fumes are registered then UVM reserves the right to interrupt construction activities until mitigation measures can be provided by UVM or work can be rescheduled during off-hours (as determined by UVM).
- e. Selection of traffic coating products shall consider the expense of the material as well as:
  - i. the impact of more expensive yet faster curing products have on the overall construction schedule and the ability to reopen traffic surfaces to public use
  - ii. Longer warranty periods.
  - iii. Consult the UVM project manager to collaboratively define the product selection criteria (such as these) on a case-by-case basis.
- f. The design consultant is responsible for proposing coating types and locations to balance expense and durability.
  - i. Depending on the project budget, combinations of less expensive and less durable coatings may be used in less wear-intensive areas and more expensive/more durable coatings used in higher-wearing areas.
- g. Snow removal methods of the area to be coated shall be reviewed with the UVM project manager. Steel vs. rubber tipped snowplows required different hardness of the coating to withstand excessive wear.

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**2. References**

- a. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- b. ASTM E96 Standard Test Method for Water Vapor Transmission of Materials
- c. ASTM F710 Standard Practice for preparing Concrete Floors to Receive Resilient Flooring

**3. Required Submittals:**

- a. Product Data: For each type of product, including installation instructions and product characteristics and limitations.
- b. Samples for Verification
- c. Maintenance Data

**4. Products, Materials & Equipment:**

- a. All layers of specified traffic coatings and accessory materials shall be compatible with each other and substrates coatings are applied to.
- b. Manufacturers: The following manufacturers will be reviewed with the UVM project manager by the design consultant for acceptable inclusion in the project.
  - i. Crossfield Products Corp.; Dex-O-Tex Flex Shield.
  - ii. Advanced Polymer Technology Corporation.
  - iii. BASF Construction Chemicals, LLC - Building Systems.
  - iv. Euclid Chemical Company (The); an RPM company.
  - v. Key Resin Company.
  - vi. Neogard; Division of Jones-Blair.
  - vii. Pacific Polymers International, Inc.
  - viii. Sherwin-Williams Company (The).
  - ix. Tremco Incorporated; an RPM company.
- c. Pedestrian and Vehicular coatings shall be resistant to petroleum products as campus pedestrian paths will receive vehicular traffic.
- d. Pedestrian and Vehicular coatings shall be resistant to de-icing chemicals (particularly calcium chloride)
- e. Traffic coatings shall have the ability to stretch without tearing or loss of adhesion to substrates to accommodate movement and cracking of substrates.
- f. Do not use reinforcement in coatings intended to expand and contract with substrates.

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- g. Coatings applied to existing slabs-on-grade should be vapor permeable to avoid trapping moisture and salt in the slab.

**5. Installation, Fabrication, and Construction:**

- a. Installer shall prepare a written report listing conditions detrimental to performance of traffic-coating work.
  - i. Installer shall proceed with installation only after substrate construction and penetrating work have been completed and unsatisfactory conditions have been corrected.
- b. Before applying traffic coatings, clean and prepare substrates according to manufacturer's written instructions to produce clean, dust-free, dry substrate for traffic-coating application. Remove projections, fill voids, and seal joints if any, as recommended in writing by traffic-coating manufacturer.
- c. Concrete Substrates shall be prepared as acceptable to manufacturer.
- d. Provide sealant cants at penetrations and at reinforced and nonreinforced, deck-to-wall butt joints.
- e. Apply reinforcing strip in traffic-coating system where recommended in writing by traffic-coating manufacturer.
- f. Apply coats as directed by manufacturers in thickness and quantity indicated.
- g. Traffic coatings shall be protected from damage and wear after installed during remainder of construction period.
- h. Spillage and soiling from application of coatings shall be cleaned from adjacent construction.
- i. Where fast cure times are involved due to coating type, installers shall be experienced with the specified products and cure times.
- j. Substrates shall be measured for the manufacturer's allowed moisture content by the installer prior to coating application.

**6. Warranties:**

- a. Manufacturer's standard coating repair and replacement warranty for coatings that fail in materials or workmanship
  - i. Failure to be defined as including:
    - 1. Adhesive or cohesive failures.
    - 2. Abrasion or tearing failures.

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3. Surface crazing or spalling.
  4. Intrusion of water, oils, gasoline, grease, salt, deicer chemicals, or acids into deck substrate
- b. Warranty periods vary with different types of coatings. Consult with the UVM project manager to determine project criteria influencing the desired warranty period.