# Section 07 26 00 - Vapor Retarders

# Guide Specification for VAPORSEAL™-HM PLUS

## PART I – GENERAL

### 1.1 SUMMARY

A. Furnish all labor, materials, tools and equipment as necessary to perform installation of Concrete Floor Sealer on new and/or existing concrete slabs as shown on drawings and as specified in this section.
B. Repairs and preparation of concrete floors.
C. Related Sections: (Delete or add necessary Sections)
    1. See section 09 62 00 – Specialty Flooring.
    2. See section 09 63 00 – Masonry Flooring.
    3. See section 09 64 00 – Wood Flooring.
    4. See section 09 65 00 – Resilient Flooring.
    5. See section 09 68 00 – Carpet.

### 1.2 REFERENCE

A. ASTM F 1869 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2004.
B. ASTM E 96 – Standard Test Methods for Water Vapor Transmission of Materials; 1995.
C. ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2002.
D. ASTM D 4541 – Pull-Off Strength of Coatings; 1995, Modified.

### 1.3 SUBMITTALS

A. General:
Submit manufacturer's certification that proposed materials, details and systems as indicated and specified fully comply with manufacturer's details and specifications. If any portion of Contract Documents does not conform to manufacturer's standard recommendations, submit notification of portions of design that are at variance with manufacturer's specifications.
B. Product Data:
    1. Submit manufacturer's literature, installation instructions and MSDS for each product.
C. Concrete Slab Test Results:
Submit slab moisture test results. Testing conducted in accordance with ASTM F1869 and / or F2170.

### 1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications:
    1. Company specializing in manufacturing floor sealing and floor leveling materials that will upon application, provide a ten year warranty that moisture emission will not exceed three pounds per 1000 square feet per 24 hours or manufacturer will repair or replace floor.

### 1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver and store in a dry, well ventilated area at minimum 60 deg. F (10 deg C) and maximum 80 deg F (32 deg C).
B. Deliver materials in manufacturer's unopened containers, fully identified with brand, type, grade, class and all other qualifying information. Provide Materials Safety Data Sheets for each product.

### 1.6 SYSTEM REQUIREMENT

A. Coordinate floor sealing installation with other trades.
B. Provide materials and accessories in timely manner so as not to delay work.

### 1.7 PROJECT CONDITION

A. Maintain surfaces to be sealed and surrounding air temperature at not less than 60 deg F. (10 deg C).
B. Exercise caution when temperatures exceed 80 deg F. (32 deg C).

## PART II – PRODUCTS

### 2.1 MANUFACTURERS

A. Approved Manufacturers: Dependable, LLC PO Box 16334 Rocky River, OH 44116-0334 Phone: (800) 227-3434 Fax (440) 333-0070.
B. Requests for substitutions will be considered only if submitted to the architect/engineer in writing and must include substantiation of product performance.

### 2.2 MATERIALS

A. Concrete Floor Coating – two-component, moisture tolerant, high density, low odor epoxy based product with the following characteristics:

| | | |
|---|---|---|
| 1. | Product: | VAPORSEAL™HM PLUS |
| 2. | Component – A and B: | Precise blend of clear and amber liquid. |
| 3. | Bond/Adhesion: (ASTM D-7234) | >480psi (>3.31Mpa) at 120 days on moist concrete |
| 4. | Permeance: (ASTM E-96-12) | <0.1 perms (grains/hr/ft2/in Hg) at 11 mils DFT |

## PART III – EXECUTION

### 3.1 EXAMINATION

A. Examine all construction substrates and conditions under which concrete floor sealer material is to be installed. Do not proceed with the concrete floor sealer installation until unsatisfactory conditions are corrected.

### 3.2 PREPARATION

A. Protect adjacent surfaces not designated to receive concrete floor sealer.
B. Substrate preparation:

1. Remove existing floor coverings, coatings, adhesives curing compounds, efflorescence, dust, grease, laitance, etc down to bare concrete,. with steel shot blasting, high pressure water or abrasive (sand) blasting. Acid etching is not acceptable.
2. Provide surface profile ICRI CSP 3 (ICRI, Sterling, VA, Guideline No. 03732.).
3. Check the surface for absorption and absence of sealers by placing dime-sized drops of water on it. Water should penetrate the surface within 30 seconds. If water beads, the surface is not ready for coating. A core should be taken and

analysis done to verify depth of penetration by the sealer. Report findings to Dependable for approval.

4. VAPORSEAL HM PLUS should have intimate contact with the concrete. However, if deteriorated areas exist that require repair/replacement, repairs shall be completed with material unaffected by water. Floor irregularities should normally be completed over VAPORSEAL HM PLUS with a suitable leveling material like SKIMFLOW ES or SKIMCRETE XL. (do not use these products underneath VAPORSEAL HM PLUS)

### 3.3 JOINT TREATMENT

A. Expansion Joints – Expansion (moving) joints should be left in tact. VAPORSEAL HM PLUS is not warranted for structural movement at expansion joints. To help reduce moisture emissions here, coat the walls and the bottom of the cleaned joint.

B. Sawcut / Control Joints – Sawcut (non-moving) joints that are over 6 months old may be filled with VAPORSEAL HM PLUS. Pour VAPORSEAL HM PLUS to depth. If creating a mortar, pour VAPORSEAL HM t PLUSo ¾ depth and pour sand into the material. When dry sweep away excess sand leaving a coarse layer.

### 3.4 INSTALLATION

A. Mix concrete floor sealer material in a one to one ratio as recommended by manufacturer.

B. Apply concrete floor sealer material in quantities and in manner set forth in manufacturer's full written directions, technical bulletins and recommendations.

C. Spread using a 3/8'' v-notch squeegee to the still moist or dry substrate. Follow with a product soaked medium napped roller to achieve a uniform coverage.

D. To smooth and prepare for floor covering installation, install Dependable leveling course as per directions and recommendations.
   1. Self-Leveling: DEPENDABLE SKIMFLOW ES
   2. Trowel Grade: DEPENDABLE SKIMCRETE XL

E. Where specified install floor covering as per manufacturer's directions and recommendations.

### 3.5 ACCEPTANCE

A. Remove left over materials and any foreign material resulting from the work from the site.

B. Clean adjacent surfaces and materials.

END OF SECTION