

GUIDE SPECIFICATION
VAPORTIGHT COAT[®]-SG2

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SECTION 09601
CONCRETE FLOOR SEALER FOR OIL CONTAMINATED SLABS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Furnish all labor, materials, tools and equipment as necessary to perform installation of a liquid applied Concrete Floor Sealer on existing oil contaminated concrete slabs as shown on drawings and as specified in this section.
- B. Repairs and preparation of concrete floors.

1.2 REFERENCES

- A. ASTM F 1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 1998.
- B. ASTM E 1907 – Standard Practices for Determining Moisture-Related Acceptability of Concrete Floors to Receive Moisture-Sensitive Finishes; 1997.
- C. ASTM C 96 - Standard Test Methods for Water Vapor Transmission of Materials; 1995.
- D. ASTM D 4541 B 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 do 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 (Material Safety Data Sheet) for each product.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Company specializing in manufacturing products specified in this Section with minimum 5 years documented experience.
- B. Installer Qualifications:
 - 1. Acceptable to manufacturer with documented experience on at least 3 projects of similar nature in past 5 years and/or training provided by the product manufacturer.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store in a dry, well ventilated area at minimum 50 deg F (10 deg C) and maximum 90 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 Material Safety Data Sheets for each product.

1.6 SYSTEM REQUIREMENTS

- 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 CONDITIONS

- A. Maintain surfaces to be sealed and surrounding air temperature at not less than 50 deg F (10 deg C).
- B. Exercise caution when temperatures exceed 90 deg F (32 deg C).

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Approved Manufacturers: AQUAFIN, Inc. 505 Blue Ball Road, #160. Elkton, MD, 21921. Phone (800) 394-1410, or (410) 392-2300, Fax (410) 392-2324; e-mail info@aquafin.net.
- B. Requests for substitutions will be considered only if submitted to the architect/engineer in writing and must include substantiation of product performance, 10 days prior to the original bid date.

2.2 MATERIALS

- A. Concrete Floor Sealer: One-part system consisting of a two-component, moisture tolerant, high density, low odor, chemically enhanced epoxy based product which must be compatible with floor finishes and adhesives approved by the manufacturer. Characteristics:

1. Product:	VAPORTIGHT COAT®-SG2
2. Component-A and B:	Precise blend of white and yellowish liquid
3. Compressive Strength:	>11,000 psi (>80 Mpa) (ASTM C-579, Modified)
4. Flexural Strength:	>4,000 psi (>27 Mpa) (ASTM D-638, Modified)
5. Bond/Adhesion:	>500 psi (>3.5 Mpa) at 28 days on damp/moist concrete (ASTM D-4541, Modified)
6. Permeance:	<1.0 perm (<5.7E-08 grams/Pa*s*m ²) (ASTM E-96)
7. Alkaline Resistance:	up to pH 14 (ASTM D-1308)
8. Cured for installation of flooring:	12–16 hrs at 73 deg F (23 deg C)
9. pH on cured surface:	7

PART 3 - 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. Provide surface profile ICRI CSP 2 - 5 (ICRI, Des Plaines, IL, Guideline No. 03732.) on smooth troweled slabs with steel shot blasting. Smooth surfaces are not acceptable, they must be roughened.
 - 2. Remove dust, grease and oil with high pressure water blasting.
 - 3. Apply chemical detergent solution (“degreaser”).
 - 4. Scrub in chemical solution with stiff-bristled broom or scrubbing machine.
 - 5. Collect and dispose of solution.

6. Repeat process as needed to achieve acceptable results.
7. Repair defective areas such as honeycombs, cracks or other defects with a suitable repairing or manufacturer recommended mortar.
8. Treat saw cut and expansion joints as per manufacturer's application guideline.
9. Carefully rinse all the surfaces to be treated with clean water, leave no standing water.
10. Do not let surface dry out. Surface must be kept wet to prevent oil from raising.

3.3 INSTALLATION

- A. Mix concrete floor sealer material in proportions recommended by manufacturer.
- B. Apply concrete floor sealer material in quantities as per manufacturer's specifications and recommendations to still damp surface.
 1. Apply in one coat for oil contaminated slabs at rate of 100 SF/gal (0.77 kg/m²).
 2. Apply using short nap roller or squeegee to the still moist substrate, and carefully scrub it into the pores with a long handled scrub brush. Follow with a roller to achieve a uniform coverage.
- C. Broadcast clean, dry, fresh water washed and dried #20 silica sand (0.5 to 1.0 mm) to "rejection" (full broadcast) or at a rate of 30 lb/100 SF (1.5 kg/m²) into the fresh concrete floor sealer where a subsequent cement-based leveling course (underlayment) or epoxy based top coating follows.
- D. Where specified install floor covering as per manufacturer's specifications and recommendations.
- E. Note: Water based adhesives under VCT, sheet vinyl, linoleum, rubber backed carpet or other non-breathable flooring systems require a cementitious underlayment on top of the concrete floor sealer for their curing process. Consult adhesive manufacturer for recommended minimum thickness of cementitious underlayment.

3.4 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

Project: (01/05)