



Specification Section 09980 Coatings for Concrete and Masonry

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U.S. DEPARTMENT OF
ENERGY



CONSTRUCTION STANDARD SPECIFICATION

SECTION 09980

COATINGS FOR CONCRETE AND MASONRY

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CONSTRUCTION STANDARD SPECIFICATION
SECTION 09980
COATINGS FOR CONCRETE AND MASONRY

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: This section includes surface preparation and application of a concrete sealant that hardens, seals, and dust-proofs concrete. Location as indicated on drawings.
- B. Related Sections:
 - 1. Section 03300, *Cast In Place Concrete*
 - 2. Section 09900, *Painting*

1.02 REFERENCES

- A. ASTM C779 Abrasion Resistance of Horizontal Concrete Surface
- B. ASTM D3359 Standard Test Methods for Measuring Adhesion by Tape Test

1.03 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm or individual experienced in applying concrete sealant similar in material, design, conditions, and extent to those indicated for this project, whose work has resulted in applications with a record of successful in-service performance.

1.04 SUBMITTALS

- A. The following shall be submitted in accordance with section 01330, *Submittal Procedures*:
 - 1. Product Data: Manufacturer's catalog data, label analysis, and application instructions

2. Sustainability Data: Submit product data, material safety data sheet, or manufacturer's certification letter indicating volatile organic compound (VOC) content of concrete and masonry coating products.
3. Manufacturer test reports describing the resistance to abrasion produced by treating concrete with specific sealant.
4. Certificate of application signed by applicator.
5. Warranty: Warranty to be signed by applicator and manufacturer at time of substantial completion.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name, label, and the following information:
 1. Product name or title of material
 2. Product description (generic classification or binder type)
 3. Manufacturer's stock number and date of manufacture
 4. Application instructions
 5. VOC content
- B. Store materials not in use in tightly covered containers, in a well-ventilated area, at a minimum ambient temperature of 45°F. Protect from freezing. Keep storage area and project site neat and orderly. Remove oily rags, empty containers, and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.06 PROJECT CONDITIONS

- A. Environmental Requirements: Maintain temperature in space to receive sealant between 45°F and 135°F for at least 72 hours before and until sealant has cured to manufacturer's requirements. Do not apply sealant in areas where dust is being generated or if temperature falls below 35°F.
- B. Protection: Protect adjacent surfaces and areas from damage due to overspray, especially glass and finished surfaces.

1.07 WARRANTY

- A. Warrant installation for a period of 10 years from date of substantial completion against dusting from abrasion.

- B. Manufacturer shall supply at its own expense, sufficient concrete sealant, to reseal any defective area.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

Subject to compliance with specification requirements. Acceptable manufacturers include, but are not limited to:

- A. Ashford Formula™, manufactured by Curecrete Chemical Co., Springville, Utah.
- B. Kure-N-Harden™, manufactured by Sonneborn®, a division of BASF Building Systems, Shakopee, MN.
- C. Seal Hard®, manufactured by L & M Construction Chemicals Inc., Omaha, NE

2.02 MATERIAL

- A. Concrete Sealant: Shall penetrate, seal, and harden concrete creating a dustproof surface that is water, oil, and abrasion resistant. Product must be non-toxic, non-combustible, and non-flammable.
- B. Number of Coats: One
- C. Color: Clear
- D. Sustainability Requirements: Sealing and hardening compounds shall contain **no** VOC.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates and conditions under which sealant application will be performed for compliance with manufacturer requirements and recommendations. Verify concrete is clean and free of laitance, grease, oil, and contaminants. Do not begin application until satisfactory conditions have been corrected.
- B. Verify concrete has been cured to the manufacturer minimum requirements before application.

3.02 PREPARATION

- A. If necessary, thoroughly clean and strip the concrete of previous treatments, laitance, oil, and other contaminants.

3.03 APPLICATION:

- A. Apply paint in accordance with manufacturer's directions.
- B. Apply directly from sealer container onto prepared surfaces, undiluted.
- C. Apply at minimum rate of 1 gallon per 150-200 sq. ft.
- D. Allow surfaces to remain wet with sealer for a minimum of 30 minutes.
- E. Remove excess sealer at the end of application procedure by water flushing and then squeegee dry.

3.04 CLEANING

- A. Cleanup: At the end of each work day, completely remove empty containers, rags, tools, rubbish, and other discarded sealant materials from the project site.
- B. Do not clean tools, brushes, applicators, and equipment at the project site unless specifically authorized by the Sandia Delegated Representative. Do not use sinks in restrooms, janitors' closets, or locations where food is prepared.
- C. Upon completion of sealant application, clean glass and sealant-spattered surfaces. Remove spattered sealant by washing and scraping, using care not to scratch or damage adjacent finished surfaces.

END OF SECTION