



SECTION 03540
CEMENTITIOUS UNDERLAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Dramatic Surface Products, DSP 508 Moisture Mitigator

1.2 RELATED SECTIONS

- A. Section 07200 – Thermal and Moisture Protection
- B. Section 09000 – Finishes

1.3 REFERENCES

- A. ASTM F 1869 Standard Test for measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
- B. ASTM F 2170 Relative Humidity in Concrete
- C. ASTM D 2240, Shore D, Durometer Hardness
- D. ASTM D 4541 Tensile Bond Strength

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300
- B. Manufacturer's MSDS and Product Data Sheets on each product to be used, including:
 - 1. Surface preparation instructions and recommendations
 - 2. Storage and handling requirements and recommendations
 - 3. Installation methods

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing Products specified in this section
- B. A successful application to concrete requires evaluation and preparation to address any conditions that would prevent a good bond.

- C. The DSP 508 Moisture Mitigator shall be installed over new or moist concrete (48 hours old) without the need to mechanically prepare on strong, clean surfaces. Weak or contaminated surfaces must be mechanically prepared by a method such as shot blasting. Mechanically prepared surfaces must have a concrete surface profile of ICRI CSP 2-3 (similar to a light broom finish).
- D. Maximum allowable moisture emission rate of concrete at the time of testing: 15 lbs. per 1,000 ft² per 24 hours when measured in accordance with ASTM F 1869, or an RH value of 95% or less when measured in accordance with ASTM F 2170.
- E. A Dramatic Surface Products Underlayment must be installed in accordance with the manufacturer's recommended specifications for use and installation.
- F. DSP 508 Moisture Mitigator shall reduce the vapor emissions of the new or moist concrete to less than 3 lbs and the Dramatic Surface Products underlayment shall be suitable to receive all types of floor coverings when allowed to properly dry in accordance with Dramatic Surface Products' recommendations.
- G. DSP 508 Moisture Mitigator shall accept most flooring materials in as soon as 4 hours.
- H. Warranty: Product shall be free from manufacturing defects and will not break down or deteriorate under normal use for 5 years.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of section 01650 and section 01660
- B. Store products in manufacturer's unopened containers until ready for installation
- C. Store products in a cool dry place out of direct sunlight
- D. Maximum shelf life is 1-year from date of manufacture in unopened containers

1.7 PROJECT CONDITIONS

- A. For interior application only
- B. Do not install over wood products or vinyl
- C. Do not install in temperatures below 50 degrees F
- D. Not for use in conditions of hydrostatic pressure or excessive moisture (>95% Relative Humidity) per ASTM F 2170

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Brand/Manufacturer: Dramatic Surface Products/ H.B. Fuller Construction Products Inc.; 1105 S Frontenac Street, Aurora, IL 60504 ASD. Tel: 800-832-9023. Fax: 800-952-2368.
Web: www.DramaticSurfaceProducts.com

1. DSP 508 Moisture Mitigator

**** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.**

- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIALS

- A. DSP 508 Moisture Mitigator: Technical Data:
1. Maximum allowable moisture emission rate of concrete: 15 lbs. per 1,000 ft² per 24 hours when measured in accordance with ASTM F 1869, or an RH value of 95% or less when measured in accordance with ASTM F 2170.
 2. Hardness: 60 when tested in conformance with ASTM D 2240
 3. Floor covering installation: 4 hours (dependent on substrate conditions, porosity and temperature).
 4. 100% solids epoxy
 5. VOC: 0 g/L (Part A and Part B mixed)
- B. Most floor coverings will require an application of a self-leveling underlayment or a trowel applied skim coat, which shall be DSP 502 Skim Coat underlayment (no primer required) or a DSP self-leveling underlayment (DSP 500 Multi-purpose Primer required), suitable for the intended use.
- C. Urethane Wood Flooring Adhesive may be applied directly to DSP 508 Moisture Mitigator if concrete surface is sufficiently smooth and level.

2.3 MIXING

- A. Mix materials in accordance with manufacturer's instructions
1. Pour 1 quart of DSP 508 Moisture Mitigator Part B hardener into the 2 gallon pail containing 3 quarts (2.84 L) DSP 508 Moisture Mitigator Part A
 2. Mix thoroughly for 3 minutes using a low speed (<150 rpm) mixer to avoid whipping air into the product. Do not over mix and avoid using high speed mixing to prevent entraining air. (NOTE: Mixing initiates an exothermic reaction. Blended material left in

the mixing container will generate heat and shorten working time.)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Test moisture content of substrates:
 - 1. Do not install if moisture vapor emission rate is >15 lbs per 1000 ft² per 24 hours, when measured in accordance with ASTM F 1869 or if relative humidity is >95%, when measured in accordance with ASTM F 2170.
 - 2. For moisture sensitive floor finishes refer to the finish floor manufacturers specifications for moisture limitations. Remediation of excessive moisture conditions must be done prior to installation Underlayment.
 - 3. Notify the Architect and General Contractor in writing of any unsatisfactory conditions

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions
 - 1. All surfaces shall be structurally sound and free from oil, grease, dust, loose or peeling paint, sealers, floor finishes, curing compounds or any contaminant that would prevent a good bond
 - 2. Minimum tensile bond strength of 150 psi (1 MPa) is required, when tested per ASTM D 4541.
 - 3. Substrate temperature shall be a minimum of 50 F during application
 - 4. Air temperature shall be maintained between 50 – 90 F

3.3 APPLICATION

- A. Immediately after mixing DSP 508 Moisture Mitigator apply onto 150 ft² grids for each 1 gallon blended kit.
- B. Spread by trowel or squeegee, allowing to penetrate the surface
- C. Back roll to avoid leaving any puddles
- D. Do not exceed 180 ft² per gallon
- E. Treat concrete cracks/joints per manufacturer's instructions

3.4 PROTECTION

- A. Protect installed products until completion of project
- B. Do not permit traffic over uncured DSP 508 Moisture Mitigator (within 4 hours of application)
- C. Underlayment (skim coat or self-leveling) must be installed within 24 hours of DSP 508 Moisture Mitigator application
- D. Urethane wood flooring adhesive may applied directly to DSP 508 Moisture Mitigator if concrete surface is sufficiently smooth and level (within 24 hours of DSP 508 Moisture Mitigator application).

END OF SECTION