



SECTION 03540 CEMENTITIOUS UNDERLAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Dramatic Surface Products, DSP™ 504 Patch, Latex Modified Cement-Based Underlayment
- B. Dramatic Surface Products, DSP 500 Multi-purpose Primer (Gypsum substrates only)
- C. Dramatic Surface Products, DSP 501 Acrylic Latex Additive (over VCT, embossed resilient floor coverings, or adhesive residue)

1.2 RELATED SECTIONS

- A. Section 03300 - Cast Underlayment Concrete
- B. Section 09000 - Finishes

1.3 REFERENCES

- A. ASTM F 2170 Relative Humidity in Concrete

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. Underlayment shall be able to be installed from a ½" thick down to a featheredge over large areas. For areas greater than ½" in thickness, apply in two-coats allowing the first coat to set before applying the second. Do not exceed a total thickness of 1".

- C. Underlayment shall not require that the substrate be primed, unless used on gypsum substrates.
- D. Underlayment shall covered by most flooring materials as soon as the surface hardens (45 minutes).
- E. Underlayment requires the addition of DSP 501 Acrylic Latex Additive when used as an embossing leveler over VCT, embossed resilient floor coverings, or adhesive residue.
- F. Gypsum substrate (minimum tensile bond strength of 72 psi (0.5 MPa)) requires priming with DSP 500 Multi-purpose Primer before underlayment installation.
- G. 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 packaging until ready for installation
- C. Store products in a cool dry place out of direct sunlight
- D. Maximum shelf life is 6 months from date of manufacture in unopened containers

1.7 PROJECT CONDITIONS

- A. For interior application only
- B. Do not install below 43 degrees F substrate temperature
- C. Not for use in conditions of hydrostatic pressure or excessive moisture (>95% Relative Humidity) per ASTM F2170

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 504 Patch Underlayment

**** 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 504 patch Underlayment: Technical Data:
 - 1. Finish flooring installation: 45 minutes
 - 2. Working Time: 10-15 minutes at 70 degrees F (21 degrees C)
 - 3. Water shall be cool, clean and potable.
- B. Primer: DSP 500 Multi-purpose Primer (Gypsum substrates only)
 - 1. "0" VOC
- C. Additive: DSP 501 Acrylic Latex Additive (VCT, embossed resilient floor coverings, or adhesive residue)
 - 1. 13 g/L VOC

2.3 MIXING

- A. Mix materials in accordance with manufacturer's instructions
- B. Standard Mix Instructions:
 - 1. Mix only as much DSP 504 Patch as can be used in 15 minutes
 - 2. Slowly add the entire bag of DSP 504 Patch into 3-3½ quarts of clean, cool water not over 70 degrees F
 - 3. Mix at a low speed (not exceeding 300 rpm)
 - 4. Use mixing ratio of 3 parts powder to 1 part water for smaller amounts
 - 5. Mix thoroughly to a smooth, lump-free consistency
- C. Additive Mixing Instructions:
 - 1. Slowly add the entire bag of DSP 504 Patch into 1 gallon of DSP 501 Additive
 - 2. Mix at a low speed (not exceeding 300 rpm)
 - 3. Mix thoroughly to a smooth, lump-free consistency

PART 3 EXECUTION

3.1 EXAMINATION

- A. Test moisture content of substrates:
 - 1. Per ASTM F 2170, do not install if relative humidity is >95%
 - 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 of underlayment.
- B. 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 72 psi (0.5 MPa) is required
 - 3. Substrate temperature shall be a minimum of 43 F during application
 - 4. Air temperature shall be maintained above 50 F
 - 5. For installation over cutback adhesive, remove adhesive by scraping until all that remains is a thin transparent layer of adhesive residue (minimum tensile bond strength of 72 psi (0.5 MPa) is required)
 - 6. For installation over gypsum substrates (minimum tensile bond strength of 72 psi (0.5 MPa) is required), prime with DSP 500 Multi-purpose Primer; 1 part primer to 3 parts water.
 - 7. Do not cover existing building expansion or control joints.

3.3 APPLICATION OF UNDERLAYMENT

- A. Immediately after mixing DSP 504 Patch, with a flat steel trowel, work underlayment into the void to be filled
- B. Finish to a level surface to achieve desired smoothness

3.4 PROTECTION

- A. Protect installed products until completion of project
- B. Do not permit traffic over unprotected floor underlayment surfaces

END OF SECTION