SECTION 03 5400

CAST UNDERLAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Liquid-applied self-leveling floor underlayment.
   1. Use Cementitious type at UZIN NC 150.

1.02 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.

B. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.

C. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete; 1999 (Reapproved 2014).

D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.

1.04 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.

B. Installer Qualifications: An authorized representative or INSTALL® (International Standards and Training Alliance) certified installer or equal, who is trained and approved by manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

1.06 MOCK-UP

A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Prepare mock-up in location designated by Architect.
   2. Area: 6 ft by 6 ft (2 m by 2 m).

B. Mock-up may remain as part of the Work.

1.07 FIELD CONDITIONS

A. Do not install underlayment until floor penetrations and peripheral work are complete.

B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. UZIN, a brand of Uzin Utz North America, Inc. NC 150 Cementitious Self-Leveling Compound. www.uzin-utz.com.

2.02 MATERIALS

A. Cementitious Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce self-leveling underlayment with the following properties:
   1. Compressive Strength: Minimum 4150 psi (28.613250210117783 MPa) after 28 days, tested per ASTM C109/C109M.
   2. Flexural Strength: Minimum 900 psi (6.205283178097832 MPa) after 28 days, tested per ASTM C348.
   3. Thickness: Capable of thicknesses from feather edge to maximum 1 inch (25 mm).

B. Water: Potable and not detrimental to underlayment mix materials.

C. Primer:

1. Gypsum Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

2. Standard Absorbent Concrete: UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

3. Extremely Absorbent Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

4. Wood: UZIN PE 260 Primer (undiluted).

5. Metal: UZIN PE 280 Primer

6. Other Non-Porous Substrates: UZIN PE 280 Primer

2.03 MIXING

A. Site mix materials in accordance with manufacturer's instructions.

B. Mix to self-leveling consistency without over-watering.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

A. Remove substrate surface irregularities. Fill voids and deck joints with filler. Finish smooth.

B. Vacuum clean surfaces.

C. Prime substrate in accordance with manufacturer's instructions. Allow to dry.

D. Close floor openings.

3.03 APPLICATION

A. Install underlayment in accordance with manufacturer's instructions.

B. Pump or pour material onto substrate. Do not re-temper or add water.
   1. Pump, move, and screed while the material is still highly flowable.
   2. Be careful not to create cold joints.
   3. Wear spiked shoes while working in the wet material to avoid leaving marks.

C. Place to indicated thickness, with top surface level to 1/8 inch in 10 ft (1:1000).

D. If a fine, feathered edge is desired, steel trowel the edge after initial set, but before it is completely hard.

3.04 CURING

A. Once underlayment starts to set, prohibit foot traffic until final set has been reached.

3.05 PROTECTION

A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.

B. Do not permit traffic over unprotected floor underlayment surfaces.

END OF SECTION

SECTION 03 5400

CAST UNDERLAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Liquid-applied self-leveling floor underlayment.
   1. Use Cementitious type at UZIN NC 157.

1.02 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.

B. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.

C. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete; 1999 (Reapproved 2014).

D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.

1.04 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.

B. Installer Qualifications: An authorized representative or INSTALL® (International Standards and Training Alliance) certified installer or equal, who is trained and approved by manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

1.06 MOCK-UP

A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Prepare mock-up in location designated by Architect.
   2. Area: 6 ft by 6 ft (2 m by 2 m).

B. Mock-up may remain as part of the Work.

1.07 FIELD CONDITIONS

A. Do not install underlayment until floor penetrations and peripheral work are complete.

B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. UZIN, a brand of Uzin Utz North America, Inc. NC 157 Cementitious Self-Leveling Compound. www.uzin-utz.com.

2.02 MATERIALS

A. Cementitious Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce self-leveling underlayment with the following properties:
   1. Compressive Strength: Minimum 4100 psi (28.268512255779015 MPa) after 28 days, tested per ASTM C109/C109M.
   2. Flexural Strength: Minimum 800 psi (5.5158072694202955 MPa) after 28 days, tested per ASTM C348.
   3. Thickness: Capable of thicknesses from 1/8” to maximum 2 inch (50 mm).

B. Water: Potable and not detrimental to underlayment mix materials.

C. Primer:

1. Gypsum Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

2. Standard Absorbent Concrete: UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

3. Extremely Absorbent Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

4. Wood: UZIN PE 260 Primer (undiluted).

5. Metal: UZIN PE 280 Primer

6. Other Non-Porous Substrates: UZIN PE 280 Primer

2.03 MIXING

A. Site mix materials in accordance with manufacturer's instructions.

B. Mix to self-leveling consistency without over-watering.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

A. Remove substrate surface irregularities. Fill voids and deck joints with filler. Finish smooth.

B. Vacuum clean surfaces.

C. Prime substrate in accordance with manufacturer's instructions. Allow to dry.

D. Close floor openings.

3.03 APPLICATION

A. Install underlayment in accordance with manufacturer's instructions.

B. Pump or pour material onto substrate. Do not re-temper or add water.
   1. Pump, move, and screed while the material is still highly flowable.
   2. Be careful not to create cold joints.
   3. Wear spiked shoes while working in the wet material to avoid leaving marks.

C. Place to indicated thickness, with top surface level to 1/8 inch in 10 ft (1:1000).

3.04 CURING

A. Once underlayment starts to set, prohibit foot traffic until final set has been reached.

3.05 PROTECTION

A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.

B. Do not permit traffic over unprotected floor underlayment surfaces.

END OF SECTION

SECTION 03 5400

CAST UNDERLAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Liquid-applied self-leveling floor underlayment.
   1. Use Cementitious type at UZIN NC 170.

1.02 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.

B. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.

C. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete; 1999 (Reapproved 2014).

D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.

1.04 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.

B. Installer Qualifications: An authorized representative or INSTALL® (International Standards and Training Alliance) certified installer or equal, who is trained and approved by manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

1.06 MOCK-UP

A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Prepare mock-up in location designated by Architect.
   2. Area: 6 ft by 6 ft (2 m by 2 m).

B. Mock-up may remain as part of the Work.

1.07 FIELD CONDITIONS

A. Do not install underlayment until floor penetrations and peripheral work are complete.

B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. UZIN, a brand of Uzin Utz North America, Inc. NC 170 Cementitious Self-Leveling Compound. www.uzin-utz.com.

2.02 MATERIALS

A. Cementitious Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce self-leveling underlayment with the following properties:
   1. Compressive Strength: Minimum 5300 psi (36.542223159909454 MPa) after 28 days, tested per ASTM C109/C109M.
   2. Flexural Strength: Minimum 1100 psi (7.584234995452906 MPa) after 28 days, tested per ASTM C348.
   3. Thickness: Capable of thicknesses from feather edge to maximum NO DEPTH LIMITATION inch (____mm).

B. Water: Potable and not detrimental to underlayment mix materials.

C. Primer:

1. Gypsum Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

2. Standard Absorbent Concrete: UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

3. Extremely Absorbent Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

4. Wood: UZIN PE 260 Primer (undiluted).

5. Metal: UZIN PE 280 Primer

6. Other Non-Porous Substrates: UZIN PE 280 Primer

2.03 MIXING

A. Site mix materials in accordance with manufacturer's instructions.

B. Mix to self-leveling consistency without over-watering.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

A. Remove substrate surface irregularities. Fill voids and deck joints with filler. Finish smooth.

B. Vacuum clean surfaces.

C. Prime substrate in accordance with manufacturer's instructions. Allow to dry.

D. Close floor openings.

3.03 APPLICATION

A. Install underlayment in accordance with manufacturer's instructions.

B. Pump or pour material onto substrate. Do not re-temper or add water.
   1. Pump, move, and screed while the material is still highly flowable.
   2. Be careful not to create cold joints.
   3. Wear spiked shoes while working in the wet material to avoid leaving marks.

C. Place to indicated thickness, with top surface level to 1/8 inch in 10 ft (1:1000).

D. If a fine, feathered edge is desired, steel trowel the edge after initial set, but before it is completely hard.

3.04 CURING

A. Once underlayment starts to set, prohibit foot traffic until final set has been reached.

3.05 PROTECTION

A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.

B. Do not permit traffic over unprotected floor underlayment surfaces.

END OF SECTION

SECTION 03 5400

CAST UNDERLAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Liquid-applied self-leveling floor underlayment.
   1. Use Cementitious type at UZIN NC 172.

1.02 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.

B. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.

C. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete; 1999 (Reapproved 2014).

D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.

1.04 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.

B. Installer Qualifications: An authorized representative or INSTALL® (International Standards and Training Alliance) certified installer or equal, who is trained and approved by manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

1.06 MOCK-UP

A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Prepare mock-up in location designated by Architect.
   2. Area: 6 ft by 6 ft (2 m by 2 m).

B. Mock-up may remain as part of the Work.

1.07 FIELD CONDITIONS

A. Do not install underlayment until floor penetrations and peripheral work are complete.

B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. UZIN, a brand of Uzin Utz North America, Inc. NC 172 Cementitious Self Leveling Compound. www.uzin-utz.com.

2.02 MATERIALS

A. Cementitious Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce self-leveling underlayment with the following properties:
   1. Compressive Strength: Minimum 7500 psi (51.71069315081527 MPa) after 28 days, tested per ASTM C109/C109M.
   2. Flexural Strength: Minimum 1500 psi (10.342138630163054 MPa) after 28 days, tested per ASTM C348.
   3. Thickness: Capable of thicknesses from feather edge to maximum NO DEPTH LIMITATION inch (____mm).

B. Water: Potable and not detrimental to underlayment mix materials.

C. Primer:

1. Gypsum Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

2. Standard Absorbent Concrete: UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

3. Extremely Absorbent Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

4. Wood: UZIN PE 260 Primer (undiluted).

5. Metal: UZIN PE 280 Primer

6. Other Non-Porous Substrates: UZIN PE 280 Primer

2.03 MIXING

A. Site mix materials in accordance with manufacturer's instructions.

B. Mix to self-leveling consistency without over-watering.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

A. Remove substrate surface irregularities. Fill voids and deck joints with filler. Finish smooth.

B. Vacuum clean surfaces.

C. Prime substrate in accordance with manufacturer's instructions. Allow to dry.

D. Close floor openings.

3.03 APPLICATION

A. Install underlayment in accordance with manufacturer's instructions.

B. Pump or pour material onto substrate. Do not re-temper or add water.
   1. Pump, move, and screed while the material is still highly flowable.
   2. Be careful not to create cold joints.
   3. Wear spiked shoes while working in the wet material to avoid leaving marks.

C. Place to indicated thickness, with top surface level to 1/8 inch in 10 ft (1:1000).

D. If a fine, feathered edge is desired, steel trowel the edge after initial set, but before it is completely hard.

3.04 CURING

A. Once underlayment starts to set, prohibit foot traffic until final set has been reached.

3.05 PROTECTION

A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.

B. Do not permit traffic over unprotected floor underlayment surfaces.

END OF SECTION

SECTION 03 5400

CAST UNDERLAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Liquid-applied floor patching underlayment.
   1. Use Cementitious type at UZIN NC 182.

1.02 RELATED REQUIREMENTS

A. Section 01 7000 - Execution and Closeout Requirements: Alteration project procedures; selective demolition for remodeling.

1.03 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.

B. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.

C. Certificate: Certify that products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.

B. Installer Qualifications: An authorized representative or INSTALL® (International Standards and Training Alliance) certified installer or equal, who is trained and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

1.07 MOCK-UP

A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Prepare mock-up in location designated by Architect.
   2. Area: 6 ft by 6 ft (2 m by 2 m).
   3. Do not proceed with underlayment work until workmanship of mock-up has been approved by Architect.

B. Mock-up may remain as part of the Work.

1.08 FIELD CONDITIONS

A. Do not install floor patching underlayment until floor penetrations and peripheral work are complete.

B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. UZIN, a brand of Uzin Utz North America, Inc. NC 182 Cementitious Patch & Repair Compound. www.uzin-utz.com.

2.02 MATERIALS

A. Cementitious Patching Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce smoothing and underlayment with the following properties:
   1. Compressive Strength: Minimum 4300 psi (29.64746 MPa) after 28 days, tested per ASTM C109/C109M.
   2. Flexural Strength: Minimum 1000 psi (6.89476 MPa) after 28 days, tested per ASTM C348.
   3. Final Set Time: 15 Minutes (at 70F and 65% relative humidity).
   4. Thickness: Capable of thicknesses from feather edge to UNLIMITED DEPTH.

C. Water: Potable and not detrimental to patch underlayment mix materials.

D. Primer:

1. Gypsum Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

2. Standard Absorbent Concrete: UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

3. Extremely Absorbent Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

4. Wood: UZIN PE 260 Primer (undiluted).

5. Metal: UZIN PE 280 Primer

6. Other Non-Porous Substrates: UZIN PE 280 Primer

2.03 MIXING

A. Site mix materials in accordance with manufacturer's instructions.

B. Mix to smooth consistency without over-watering.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

A. Vacuum clean surfaces.

B. Prime substrate in accordance with manufacturer's instructions. Allow to dry.

C. Close floor openings.

3.03 APPLICATION

A. Install patch underlayment in accordance with manufacturer's instructions.

B. Place to required thickness _____.

C. Place before partition installation.

3.04 CURING

A. Once patch underlayment starts to set, prohibit foot traffic until final set has been reached.

B. Air cure in accordance with manufacturer's instructions.

3.05 PROTECTION

A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.

B. Do not permit traffic over unprotected floor underlayment surfaces.

END OF SECTION

SECTION 03 5400

CAST UNDERLAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Liquid-applied floor patching underlayment.
   1. Use Cementitious type at UZIN NC 886.

1.02 RELATED REQUIREMENTS

A. Section 01 7000 - Execution and Closeout Requirements: Alteration project procedures; selective demolition for remodeling.

1.03 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.

B. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.

C. Certificate: Certify that products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.

B. Installer Qualifications: An authorized representative or INSTALL® (International Standards and Training Alliance) certified installer or equal, who is trained and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

1.07 MOCK-UP

A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Prepare mock-up in location designated by Architect.
   2. Area: 6 ft by 6 ft (2 m by 2 m).
   3. Do not proceed with underlayment work until workmanship of mock-up has been approved by Architect.

B. Mock-up may remain as part of the Work.

1.08 FIELD CONDITIONS

A. Do not install floor patching underlayment until floor penetrations and peripheral work are complete.

B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. UZIN, a brand of Uzin Utz North America, Inc. NC 886 Cementitious Skim & Repair Compound. www.uzin-utz.com.

2.02 MATERIALS

A. Cementitious Patching Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce smoothing and underlayment with the following properties:
   1. Compressive Strength: Minimum NA psi (NA MPa) after 28 days, tested per ASTM C109/C109M.
   2. Flexural Strength: Minimum NA psi (NA MPa) after 28 days, tested per ASTM C348.
   3. Final Set Time: 15 Minutes (at 70F and 65% relative humidity).
   4. Thickness: Capable of thicknesses from feather edge to maximum 0.5" inch (12.5 mm).

C. Water: Potable and not detrimental to patch underlayment mix materials.

D. Primer:

1. Gypsum Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

2. Standard Absorbent Concrete: UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

3. Extremely Absorbent Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

4. Wood: UZIN PE 260 Primer (undiluted).

5. Metal: UZIN PE 280 Primer

6. Other Non-Porous Substrates: UZIN PE 280 Primer

2.03 MIXING

A. Site mix materials in accordance with manufacturer's instructions.

B. Mix to smooth consistency without over-watering.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

A. Vacuum clean surfaces.

B. Prime substrate in accordance with manufacturer's instructions. Allow to dry.

C. Close floor openings.

3.03 APPLICATION

A. Install patch underlayment in accordance with manufacturer's instructions.

B. Place to required thickness _____.

C. Place before partition installation.

3.04 CURING

A. Once patch underlayment starts to set, prohibit foot traffic until final set has been reached.

B. Air cure in accordance with manufacturer's instructions.

3.05 PROTECTION

A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.

B. Do not permit traffic over unprotected floor underlayment surfaces.

END OF SECTION

SECTION 03 5400

CAST UNDERLAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Liquid-applied floor patching underlayment.
   1. Use Cementitious type at UZIN NC 888.

1.02 RELATED REQUIREMENTS

A. Section 01 7000 - Execution and Closeout Requirements: Alteration project procedures; selective demolition for remodeling.

1.03 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.

B. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.

C. Certificate: Certify that products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.

B. Installer Qualifications: An authorized representative or INSTALL® (International Standards and Training Alliance) certified installer or equal, who is trained and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

1.07 MOCK-UP

A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Prepare mock-up in location designated by Architect.
   2. Area: 6 ft by 6 ft (2 m by 2 m).
   3. Do not proceed with underlayment work until workmanship of mock-up has been approved by Architect.

B. Mock-up may remain as part of the Work.

1.08 FIELD CONDITIONS

A. Do not install floor patching underlayment until floor penetrations and peripheral work are complete.

B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. UZIN, a brand of Uzin Utz North America, Inc. NC 888 Cementitious Patching Compound. www.uzin-utz.com.

2.02 MATERIALS

A. Cementitious Patching Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce smoothing and underlayment with the following properties:
   1. Compressive Strength: Minimum NA psi (NA MPa) after 28 days, tested per ASTM C109/C109M.
   2. Flexural Strength: Minimum NA psi (NA MPa) after 28 days, tested per ASTM C348.
   3. Final Set Time: 15 Minutes (at 70F and 65% relative humidity).
   4. Thickness: Capable of thicknesses from feather edge to maximum 1" inch (25 mm).

C. Water: Potable and not detrimental to patch underlayment mix materials.

D. Primer:

1. Gypsum Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

2. Standard Absorbent Concrete: UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

3. Extremely Absorbent Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).

4. Wood: UZIN PE 260 Primer (undiluted).

5. Metal: UZIN PE 280 Primer

6. Other Non-Porous Substrates: UZIN PE 280 Primer

2.03 MIXING

A. Site mix materials in accordance with manufacturer's instructions.

B. Mix to smooth consistency without over-watering.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

A. Vacuum clean surfaces.

B. Prime substrate in accordance with manufacturer's instructions. Allow to dry.

C. Close floor openings.

3.03 APPLICATION

A. Install patch underlayment in accordance with manufacturer's instructions.

B. Place to required thickness _____.

C. Place before partition installation.

3.04 CURING

A. Once patch underlayment starts to set, prohibit foot traffic until final set has been reached.

B. Air cure in accordance with manufacturer's instructions.

3.05 PROTECTION

A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.

B. Do not permit traffic over unprotected floor underlayment surfaces.

END OF SECTION

1.3 REFERENCES

A. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes

B. ASTM F1869 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring

D. ASTM C1583 - Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension

E. ASTM C109M - 11b – Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (using 2 in. or [50 mm] Cube Specimens).

1.4 SUBMITTALS

A. Test Results: Moisture Test Data

B. Product Data: Submit manufacturer's product data sheets, installation instructions and Safety Data Sheets for each product used.

C. Qualification Data: For applicator, must be an approved Uzin applicator. Uzin recommends the use of INSTALL® (International Standards & Training Alliance) certified contractors.

1.5 QUALITY ASSURANCE

A. Application of the Uzin PE 480, PE 280 and NC 170 system must be by a factory trained applicator. Contact an Uzin Manufacturer Representative prior to application.

B. Manufacturer experience: Provide products from companies that manufacture all components of the system and have successfully specialized in the production of this type for more than 20 years.

1.6 WARRANTY

A. UFLOOR Systems Inc. Limited 10 year Warranty.

B. UFLOOR Systems Inc. Limited Lifetime Warranty.
   a. Contact UFLOOR Systems Inc. for details.

C. INSTALL® Warranty on Labor program.
   a. Contact INSTALL® for details. www.installfloors.org/warranty/ or email: install@carpenters.org

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