



SECTION 03 54 00- Cast Underlayment

Guide Specification SKIMCRETE® XL

PART I – GENERAL

1.1 SUMMARY

- A. Section Includes: Floor patching and resurfacing required prior to installation of floor coverings. Scope of repair work [is shown on Drawings.] [includes _____].]
- B. Related Documents: Drawings, Conditions of Contract, Division 1 - General Requirements and other Contract Documents affect this Section.
- C. Related Sections:
 - 1. See Section 01 11 00 - Summary
 - 2. See Section 09 00 00- Finishes

1.2 REFERENCES

- A. American Society for Testing and Materials:
 - 1. ASTM C109 Modified - Compressive Strength of Hydraulic Cement Mortars.
 - 2. ASTM C348 - Flexural Strength of Hydraulic Cement Mortars.
 - 3. ASTM C307 - Tensile Strength of Chemical Resistant Mortars, Grouts, and Monolithic Surfacing.
 - 4. ASTM C266 -Time of Setting of Hydraulic Cement Paste by Gilmore Needle.
 - 5. ASTM F1869 – Standard Test Method for Measuring the Moisture Vapor Emission Rate of a Concrete Subfloor.

1.3 SUBMITTALS

- A. Submit:
 - 1. Manufacturer's product data sheets and installation instructions to prove compliance with specified requirements.
 - 2. [Sample of manufacturer's limited warranty and warranty application procedures.]

1.4 QUALITY ASSURANCE

- A. Qualifications
 - 1. Contractor shall be knowledgeable and well trained in the use of floor underlayment repair materials.
- B. Field Samples Application: At location on Project selected by [Architect] [Engineer], perform substrate preparation work using methods proposed for Project. Notify Architect/Engineer to allow observation. Install a sample of material using similar techniques that will be used on the project. The sample size shall be ___ft. x ___ft. Accepted sample establishes standard for Work. Complete application when no longer needed for reference.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Comply with manufacturer's instructions. Deliver in original, unopened packaging. Store in dry conditions and protect from direct sun exposure, freezing, and extreme heat (greater than 105F.(41C)).

1.6 PROJECT CONDITIONS

- A. Environmental Requirements
 - 1. Hot weather: Comply with ACI 305. Do not apply in extreme heat (greater than 105F(41C.)).
 - 2. Cold weather: Comply with ACI 306. Do not apply when ambient, surface, or material temperature is below 50F. (10C.).

PART II – PRODUCTS

2.1 MANUFACTURERS

- A. Dependable, LLC phone 1-800-227-3434.
- B. Substitutions: Comply with [Instructions to Bidders] [_____] for substitution request procedures.

2.02 MATERIALS

- A. Primer, for difficult adhesion surfaces only, shall be Acrylic Embossing Additive. (Difficult adhesion surfaces are covered in section 3.02.A.
- B. Water shall be clean, cool, and potable.
- C. Factory blended, latex modified, premixed cementitious trowel applied underlayment and floor patch. Available products, subject to compliance with requirements, are limited to the following:
 - 1. Skimcrete XL
 - 2. Technical Data
 - a. Compressive Strength (ASTM C109): 4,000 psi (28 Mpa) @ 28 days (F-1) Modified
 - b. Flexural Strength (ASTM C348): 1,300 psi (9 Mpa) @ 28 days
 - c. Tensile Strength (ASTM C307): 500 psi (3 Mpa) @ 28 days
 - e. Working Time: 15 minutes
 - f. Set Time, Final (ASTM C266): 30 minutes (F-2)
 - g. pH <10
 - h. Ready for Covering: 30 – 75 minutes (F-2)

2.3 EQUIPMENT

- A. Mixing devices: The material should be mixed by drill and paddle method
 - 1. The drill should be at least ½” in size and capable of generating 150 – 450 RPM.
 - 2. The paddle may be an epoxy mixer (egg beater / cage), jiffy mixer, rectangular speedy mixer, or other type designed not to entrain or entrap air.

PART III – EXECUTION

3.1 PREPARATION

- A. All substrates, regardless of type, must be solid, sound, clean, and primed.
 - 1. SURFACE PREPARATION: All supporting surfaces shall be structurally sound, solid, free of movement and well bonded. Ensure underlying surface is free of excess moisture and clean of any contaminants such as dirt, wax, oil, paint, curing compounds, sealers, solvent, oil products or any gypsum materials or foreign matter that may interfere with a proper bond. When a proper bond is questionable, perform a test patch in an inconspicuous area. DO NOT PROCEED if dissatisfied with bond and contact DEPENDABLE’s Technical Services.
 - 2. Concrete Floors: Remove all foreign matter by mechanical means. Floor must be free of efflorescence and excess moisture.
 - 3. Wood Floors: Ensure wood floors are free of movement and excessive moisture. Fasten any loose boards. Stripwood floors should be covered with underlayment grade quality board.
 - 4. Underlayment Board Joints: To avoid “peaking,” do not butt sheets tightly. Leave a space the thickness of a matchbook cover (approx. 1/32”) between sheets. The

installer may wish to seal the joints, hammer-indentations and other “raw” spots with an appropriate brush coat of DEPENDABLE LATEX. This will keep the moisture in SKIMCRETE XL and/or the adhesive from being drawn into the board, which may cause swelling and/or delamination.

5. Existing Ceramic Tile, Quarry Tile, etc. (Not Vinyl-VCT & VAT): Must be well bonded. The surface must be clean and free of waxes and contaminants that might inhibit bonding. For best bond, prime with Acrylic Embossing Additive. Once primed, allow AREA to nearly dry and become tacky before covering with SKIMCRETE XL.
6. Metal & Other Types of Flooring: Remove any rust or contaminants. Wash and allow to dry completely. Prime with DEPENDABLE ACRYLIC EMBOSSING ADDITIVE. Allow to nearly dry and become tacky. (This includes metal, epoxy and terazzo)
7. Vinyl Floors: Existing resilient floors shall be single layer, fully adhered and well bonded. Thoroughly clean all foreign matter such as dirt, grease, oil, wax or any other contaminants which may inhibit bond. While floor is wet, use a cleaning pad and remove any remaining wax or dirt, while scuffing the surface. Rinse thoroughly with clean water and allow to dry. New wear layers being sold can be difficult to bond to. While some wear layers may be bonded to with just a thorough cleaning, others may require abrading and/or priming the surface with DEPENDABLE ACRYLIC EMBOSSING ADDITIVE. ACRYLIC EMBOSSING ADDITIVE must be added to the powdered product to increase bonding characteristics. The installer is advised to always perform a test patch area over resilient goods to assure acceptable bond.
8. Adhesive Residue: Using mechanical means, remove loose, brittle or thick/heavy accumulations to a well-bonded residue. Sweep or vacuum area. Prime residue with DEPENDABLE ACRYLIC EMBOSSING ADDITIVE and allow to become nearly dry and tacky. Caution: Cutback adhesive may contain asbestos. Contact state or local authorities for proper removal and disposal procedures.

3.2 INSTALLATION

A. Mixing

1. Mix SKIMCRETE XL with cool clean water or DEPENDABLE latex additives for every 10 lbs use 1.5 quarts or 4 quarts for every 25 lbs. Use clean containers and mixing implements, as leftover residue can accelerate set and/or reduce pot life of new mix. Mix thoroughly to a lump-free trowelable consistency. Mixture will remain workable for approximately 15 minutes. Mix only what can be used in that time. Do not attempt to extend pot life by later adding water. Do not mix directly on floor. Use a mixing bucket. Over vinyl floors or whenever a primer is necessary use ACRYLIC EMBOSSING ADDITIVE must be used in place of water.

B. Application

1. Using a smooth at trowel, force SKIMCRETE XL into joints, cracks holes and deeper fills bearing down on the trowel. Smooth the surface to a thin covering over the prepared substrate. Build any thicker fills or transitions to 5/8” thick. Deeper fills may be achieved with multiple lifts. Always allow prior lift to dry completely. When dry, sand or scrape smooth for a perfect finish.
2. Vinyl Floors — When using SKIMCRETE XL as an embossing leveler, mix approximately 2.5-3 parts SKIMCRETE XL into 1 part ACRYLIC EMBOSSING ADDITIVE. Mix to a lump free trowelable mix. Apply using a at smooth steel trowel drawing material across the pattern to be filled at angles to the pattern to ensure an even and complete ll. Allow to dry completely, at least two (2) hours before covering.
3. Metal Floors — To assure no chemical reaction and a good bond, performing a test patch is recommended.

3.3 PRECAUTIONS AND LIMITATIONS

- A. Where hydrostatic pressure (water) exists or moisture emissions exceed level permitted for installing floor covering.
- B. Where surface or ambient temperature falls to or below 50°F within 72 hours of installation.
- C. Over presswood, particle board, masonite, chipboard, OSB, underlayment board not of APA Underlayment (exterior) grade or similar dimensionally unstable materials susceptible to movement or swelling.
- D. Over gypsum based patches or underlayment material due to chemical reaction.
- E. Single layer stripwood floors.

F-1 The modification for ASTM C109 consists of air curing the samples versus the standard's procedures of placement in a lime bath for 7 days. All other procedures are followed.

F-2 When timing is referenced, tests were conducted at 67 - 73 F. (19 - 23 C.) with a relative humidity of 50 - 60%.

END OF SECTION