SECTION 03 54 00 - Cast Underlayment

CAST UNDERLAYMENT

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* SpexCrete; lightweight concrete.  
This section is based on the products of SpexCrete, which is located at:  
29299 Clemens Rd. Unit 1-L  
Westlake, OH 44145  
Tel: 440-462-1500  
Email:[request info (dgorski@spexcrete.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=SpexCrete&coid=53431&rep=&fax=&message=RE:%20Spec%20Question%20(03540scu):%20%20&mf=)  
Web:<https://spexcrete.com>  
[[Click Here](https://www.arcat.com/arcatcos/cos53/arc53431.html)] for additional information.  
SpexCrete Commercial Underlayments deliver innovative solutions to the commercial flooring industry. Our proprietary and patent-pending technologies include SpexCrete™ 350 ULU, an ultra-lightweight pumpable cementitious underlayment that is designed for deep fill flooring applications where strict weight parameters have been set, and SpexCrete™ 5000 SLU, which requires minimal surface preparation, boasts high compressive strength, is resistant to cracking and can go over gypsum.  
At SpexCrete, we take great pride in offering exceptional customer service, quality products and shipping support to the hard working contractors and installers across the country.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Ultra-lightweight underlayment.
    2. Self-leveling underlayment.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 06 11 16 - Mechanically Graded Lumber.
    3. Section 09 30 00 - Tiling.
    4. Section 09 60 00 - Flooring.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
    2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
       1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
       2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
       3. Retain mock-up during construction as a standard for comparison with completed work.
       4. Do not alter or remove mock-up until work is completed or removal is authorized.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
     2. Protect from damage due to weather, excessive temperature, and construction operations.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. WARRANTY
     1. Manufacturer's standard limited warranty unless indicated otherwise.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: SpexCrete, which is located at: 29299 Clemens Rd. Unit 1-L; Westlake, OH 44145; Tel: 440-462-1500; Email:[request info (dgorski@spexcrete.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=SpexCrete&coid=53431&rep=&fax=&message=RE:%20Spec%20Question%20(03540scu):%20%20&mf=); Web:<https://spexcrete.com>

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

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Applications: Indoor Deep Fill Flooring for High Rise Commercial and Residential Structures, Lightweight Void Fill, Ideal for Fixing out of Level Floors, Great for Mass Timber Construction, Building Renovation, Luxury Apartments and Condos. Delete article if not required.

* 1. ULTRA LIGHTWEIGHT UNDERLAYMENT
     1. Basis of Design: 350 ULU as manufactured by SpexCrete. A just add water, Ultra Lightweight Underlayment designed for deep fill flooring applications. Provides a weight savings of 69 percent as compared to traditional underlayments. Used as a deep fill replacement for EPS board. Can easily be pumped and placed.
        1. Simple to Finish: Can be Sloped.
        2. Designed for interior use.
        3. Application Temperature Range: 50 to 90 degrees F (10 to 32 degrees C).
        4. Fresh Density: 40 to 44 lbs per cu ft (6.28 to 6.91 kN per cu m).
        5. Final Density: 36 to 38 lbs per cu ft (5.65 to 5.97 kN per cu m).
        6. Weight; lbs per sq ft at 1 inch thick: 3 lbs (1.36 kg).
        7. Spread: 19 to 21 inches (483 to 533 mm).
        8. Compressive Data:
           1. After 1 Day: 120 to 150 psi (827 to 1034 kPa).
           2. After 28 Days: 325 to 375 psi (2241 to 2585 kPa).
        9. Minimum Thickness: 1 inch (25 mm).
        10. Maximum Thickness: 6 inch (152 mm).
            1. Time to Topcoat: 18 to 24 hours,
        11. Rate of Coverage for one 20 lbs (9.07 kg) bag:
            1. Thickness of 1 inch (25 mm): 7 sq ft (0.65 sq m).
            2. Thickness of 2 inch (51 mm): 3-1/2 sq ft (0.33 sq m).
            3. Thickness of 3 inch (76 mm): 2-1/3 sq ft (0.22 sq m).
        12. Shelf Life: 6 months.

\*\* NOTE TO SPECIFIER \*\* Applications: Multifamily / High-Rise Residential, Mixed Use Multi-Story Buildings, Retail, Luxury Apartments, Commercial Offices, Institutional, Schools and Universities. Delete article if not required.

* 1. SELF LEVELING UNDERLAYMENT
     1. Basis of Design: 5000 SLU as manufactured by SpexCrete. A floor leveling system requiring minimal surface preparation, has high compressive strength, with little to no shrink. A hydraulic cement based self-leveling underlayment; smooth, durable, and easy to pump. Can be installed over most substrates, including existing gypsum.
        1. Fast Setting, Light Traffic in 4 hours.
        2. Normal traffic in 24 hours.
        3. Utilizes approved local bulk sand.
        4. Interior use only. Not a wear surface. Floor covering is required.
        5. Application Temperature Range: 40 to 90 degrees F (4 to 32 degrees C).
        6. Final Density: 110 lbs per cu ft (17.28 kN per cu m).
        7. Mixing Ratio:
           1. One bag of 5000 SLU 50 lbs (22.68 kg).
           2. Approved Sand: 50 lbs (22.68 kg).
           3. Water: 9.5 to 11 quarts (9 to 10.41 L).
        8. Compressive Data:
           1. After 1 Day: Greater than 2000 psi (13.789 MPa)
           2. After 7 Days: Greater than 4000 psi (27.579 MPa)
           3. After 28 Days: Greater than 4000 psi (27.579 MPa)
        9. Minimum Thickness: 1/8 inch (3 mm).
        10. Maximum Thickness: 1-1/2 inch (38 mm).
        11. Color: Gray
        12. Working Time: 20 minutes.
        13. Yield with Sand: 46 to 48 sq ft () at 1/4 inch (6 mm) thick.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly constructed and prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
   4. FIELD QUALITY CONTROL
      1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.
   5. CLEANING AND PROTECTION
      1. Clean products in accordance with the manufacturers recommendations.
      2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION