SECTION 03 39 35

CONCRETE DENSIFIER/SEALER/HARDENER

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

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\*\* NOTE TO SPECIFIER \*\* L&M™ Construction Chemicals; concrete densifier, sealer, hardener.  
This section is based on the products of L&M™ Construction Chemicals, which is located at:  
1 LATICRETE Park N.  
Bethany, CT 06524-3423  
Toll Free Tel: 800-362-3331  
Tel: 402-453-6600  
Email: [request info (info@lmcc.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=L%26M+Construction+Chemicals&coid=41606&rep=&fax=&message=RE:%20Spec%20Question%20(03395lmc):%20%20&mf=)  
Web: [www.laticrete.com/lmcc](http://www.laticrete.com/lmcc)   
 [ [Click Here](http://www.arcat.com/arcatcos/cos41/arc41606.html) ] for additional information.  
L&M Construction Chemicals, Inc. manufactures sealers and sealants building products relating to: Concrete; Specially Placed Concrete; Concrete Curing; Curing, Sealing and Hardening Concrete Floors; Grouts; Concrete Rehabilitation; Masonry; Masonry Grout; Thermal and Moisture Protection; Water Repellents; Finishes and Floor Treatment.  
This section specifies treatment of uncovered concrete floor surfaces that will be exposed to medium to high volume of rubber wheeled and pedestrian traffic. This section applies to concrete floor slabs that need to be dustproofed, hardened, and/or sealed against petroleum, dirt, water and other mild contaminants. Typical applications include concrete floors in warehouses, distribution centers, manufacturing plants, sports arena concourses, retail sales floors, mechanical rooms, janitor closets, stairwells, concourses, and exterior loading docks and concrete containment facilities.

1. GENERAL
   1. SECTION INCLUDES
      1. Concrete sealer/densifier/hardener.
   2. 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: Cast-in-Place Concrete.
  1. REFERENCES
     1. Corps of Engineers Spec: CEGS 03300 4-79.
     2. USDA approved.
     3. Department of Navy, GSA, VA approved.
  2. SYSTEM
     1. Description: A sealer/densifier/hardener that will react with concrete surfaces to produce a dense, hydrophobic, insoluble, moisture barrier to seal out contaminants, while hardening and densifying surface.
     2. Design Criteria:
        1. ACI 302 Class 1 through 4 concrete floors.
        2. May be used on Class 5 and 6 floors when used with mineral or metallic aggregate hardeners and toppings, and Class 9, Super-flat floors.
        3. Complies with all Federal and State VOC requirements.
        4. Independent Test Data, ASTM C 779, Procedure A, reduction of surface abrasion by 50% or more at the 30 minute time interval.
  3. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Samples: Furnish representative samples if requested by the Architect.
     4. Project Specific Information:
        1. Test reports.
        2. Certificate of rate of application.
        3. Signed warranty.
     5. Application Rate: From Installer, based on project requirements.
  4. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
     2. Installer Qualifications: Minimum 2 year experience installing similar products.
        1. Approved in writing by manufacturer.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project 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: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Refinish mock-up area as required to produce acceptable work.
  1. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to starting work of this section.
     2. At the Architect's request, technical personnel shall be available for a pre-job conference to review installation procedures.
  2. DELIVERY, STORAGE AND HANDLING
     1. Deliver to jobsite in sealed, labeled containers.
     2. Store and handle to prevent damage to product and environment.
  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.
     2. Environmental requirements: Comply with applicable VOC and EPA requirements.
  4. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
  5. WARRANTY
     1. Warranty: Provide written warranty signed jointly by applicator, manufacturer and contractor. Warrant installation for a period of 10 years from date of substantial completion against dusting from abrasion.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: L&M™ Construction Chemicals, which is located at: 1 LATICRETE Park N.; Bethany, CT 06524-3423; Toll Free Tel: 800-362-3331; Tel: 402-453-6600; Email: [request info (info@lmcc.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=L%26M+Construction+Chemicals&coid=41606&rep=&fax=&message=RE:%20Spec%20Question%20(03395lmc):%20%20&mf=); Web: [www.laticrete.com/lmcc](http://www.laticrete.com/lmcc)

\*\* 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.
  1. CONCRETE SEALER/DENSIFIER/HARDENER
     1. Product: SEAL HARD by L&M Construction Chemicals; a solution of 100% active ingredient chemicals which penetrate concrete to seal, densify, dustproof and harden to resist water and oil penetration, and contamination.
        1. Active ingredients: 100 percent.
        2. Type: Alkali Siliconate.
        3. Flash Point: None.
        4. Specific Gravity: 1.155.
        5. VOC: gm/L: 0.
        6. Solids minimum: 30 percent.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
      3. Assure surfaces are clean and free of all contaminants, and any film forming curing compounds or sealers.
      4. Existing conditions, prior to installation:
         1. Assure concrete has been cured a minimum of 3 days.
         2. Assure concrete is clean and free of membrane forming curing compounds and/or other sealers.
         3. Concrete is free of laitance, grease, oil and contaminants.
      5. Protect concrete from construction activity staining.
   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. Protection: Protect adjacent surfaces/areas from damage due to over spray; especially glass and painted surfaces.
   3. INSTALLATION
      1. Apply in accord with manufacturer's instructions:
         1. Apply directly from sealer container onto prepared surfaces, undiluted.
         2. Application equipment: Mechanical "walk-behind" or riding scrubber.
         3. Apply at minimum rate of 1 gallon per 150-200 sq. ft.
         4. Allow surfaces to remain wet with sealer for 30-60 minutes.
         5. Remove excess sealer at end of application procedure by water flushing and then squeegee dry.
         6. Apply in 1 coat typical.
         7. Apply 2 coats to porous or rough concrete surfaces.
         8. Apply 2 coats to floor areas that will be exposed to frequent oil spills.
      2. Leave area broom clean.
   4. PROTECTION
      1. Protect installed products until completion of project.
      2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION