

DIVISION 2 – EXISTING CONDITIONS
SECTION 02 83 19.13 LEAD-BASED PAINT ABATEMENT - ENCAPSULATION

1.00 GENERAL REQUIREMENTS

1.01 WORK INCLUDED

- A. Provide labor, equipment and materials to complete encapsulation of lead-based paint work as indicated on the drawings and as specified herein.

1.02 RELATED SECTIONS

A. Specified elsewhere:

1. Section 030000 – Concrete
2. Section 040000 – Masonry
3. Section 050000 – Metals
4. Section 060000 – Wood, Plastics and Composite
5. Section 09900 – Finishes

B. References:

1. Lead and Environmental Hazards Association (LEHA)
2. American Society for Testing and Materials (ASTM)
3. U.S. Environmental Protection Agency (USEPA, EPA)
4. U.S. Department of Housing and Urban Development (HUD)

C. Notes to Users of this Document (e.g., Architects, Engineers, Designers and Consulting Professionals):

1. This specification is supplied in an exhaustive format with the intent of achieving as comprehensive inclusion of project factors as possible.
2. The specifier is not obligated to utilize this specification in entirety, but instead is encouraged to adopt/adapt/apply those provisions which are applicable to specific projects.
3. The Design Services Team (DST) of ICP Construction has prepared this overall specification. Users of this specification are strongly encouraged to engage DST's resources and industry expertise in customizing this specification:
 - a. Web: www.icp-construction.com/dst
 - b. Email: DST@icp-construction.com
 - c. Phone: 603-759-8503

1.03 QUALITY ASSURANCE

A. Cited Standards are incorporated herein by reference and govern the work:

1. ASTM E 1795-04 *Standard Specification for Non-Reinforced Liquid Coating Encapsulation Products for Leaded Paint in Buildings*, 2004
2. ASTM E 1796-03(2011) *Standard Guide for Selection and Use of Liquid Coating Encapsulation Products for Leaded Paint in Buildings*
3. Requirements for Lead-Based Paint Activities in Target Housing and Child-Occupational Facilities: 40 CFR 745, U.S. Environmental Protection Agency (EPA) (1996)

4. U.S. Department of Housing and Urban Development (HUD), *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, Chapter 13 Abatement by Encapsulation, 2nd edition, July 2012
 5. Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of the Housing and Community Development Act of 1992 (US Public Law 102-550), Section 1017, 42 U.S.C. 4852c)
 6. Lead Standard: 29 CFR 1910.1025 and 29 CFR 1926.62, U.S. Occupational Safety and Health Administration (OSHA) (1993)
 7. Steel Structures Painting Council (SSPC):
 - a. SSPC-SP 1 - Solvent Cleaning.
 - b. SSPC-SP 2 - Hand Tool Cleaning.
 - c. SSPC-SP 3 - Power Tool Cleaning.
 - d. SSPC-SP5/NACE No. 1, White Metal Blast Cleaning.
 - e. SSPC-SP6/NACE No. 3, Commercial Blast Cleaning.
 - f. SSPC-SP7/NACE No. 4, Brush-Off Blast Cleaning.
 - g. SSPC-SP10/NACE No. 2, Near-White Blast Cleaning.
 - h. SSPC-SP11, Power Tool Cleaning to Bare Metal.
 - i. SSPC-SP12/NACE No. 5, Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating.
 - j. SSPC-SP 13 / NACE No. 6 Surface Preparation for Concrete.
 8. South Coast Air Quality Management District (SCAQMD): Rule 1113 - Architectural Coatings.
- B. Single Source Responsibility: Obtain lead encapsulation coating from a single manufacturer with not less than 15 years of successful experience in manufacturing and specifying installation of the principal materials described in this section. Provide secondary/supplementary materials (topcoats, primers, caulking/foam) only of type and from a source recommended by the manufacturer of the primary material.
- C. Contractor Experience: The installer shall be a firm or individual experienced in applying coatings similar in material, design, and extent to those indicated for this Project, and whose work has resulted in applications with a record of at least 5 projects of successful in-service performance completed in the last 10 years.¹ Contractor must furnish the following proof of experience:
1. Letter or Certificate provided directly by Approved Encapsulant manufacturer stating that contractor (including project dedicated supervisor) has completed and satisfactorily demonstrated competent understanding of instructional training in lead-based paint encapsulation, and specific use of the Approved Encapsulant.
- D. Sampling of Material:
1. When directed by Architect/Engineer, obtain test samples from material stored at the project site or source of supply (distributor or manufacturer).
 2. Select samples at random from sealed containers.
 3. Custom Colors: Wet and dry samples should be prepared and supplied by the manufacturer, either matched from a field obtained sample from the project site or matched to a color fan deck from a national paint manufacturer/brand (such as California Paints, Benjamin Moore, Sherwin-Williams, etc.). Owner, Client, Enforcement Authority, Architect or Engineer will evaluate custom color samples and provide written acknowledgement should the matched color be determined to be acceptable. (Also, see 1.04, subsection E *Submittals*).

- E. Pilot Application/Mock-Up: Upon request (By Owner, Client, Enforcement Authority, Architect or Engineer), it may be determined necessary to provide a mock-up for evaluation of surface preparation techniques, validation of performance expectations, and anticipated application workmanship. .
1. Prepare surfaces designated for verification of suitability of proposed surface preparation procedures (including primers, bonding agents, surface fillers, caulk, foam).
 2. Encapsulate area designated by applying proposed encapsulant strictly in accord with coverage rate and dry film thickness proposed for project.
 3. Do not proceed with remaining work until pertinent project authority (By Owner, Client, Enforcement Authority, Architect or Engineer), approves the mock-up.

1.04 SUBMITTALS

- A. Submit three (3) copies of product literature including technical data and label. Product literature shall include the Approved Encapsulant product, and the same documentation for all supplementary system components (reference end notes of this specification for system components potentially employed).
- B. Submit three (3) copies performance testing reports from an independent testing laboratory demonstrating satisfactory compliance with all requirements of the ASTM E 1795 protocol, and the dry film thickness at which compliance was achieved.
- C. Submit three (3) copies of 20-year performance warranty, and any product installation and any application guide relevant to qualifying application for manufacturer's warranty. Warranty shall cover performance in accord with intent and purpose of encapsulation and definition of abatement of lead-based paint, as described in documents cited at 1.03 Quality Assurance. Encapsulant warranties which are limited to claims concerning manufacturer defect are not acceptable. Acceptable encapsulant performance warranties will be limited to materials, and not to labor. Not all application circumstances will be eligible for a performance warranty, and the manufacturer's representative must have been consulted regarding any warranty prior to bidding and award of the project. No warranty extended subsequently will be considered valid without the express written consent of and provision by the manufacturer.
- D. Submit three (3) copies of contact information for pertinent local representative Approved Encapsulant manufacturer. Manufacturer must have representation sufficiently local and knowledgeable that assistance is available and informative in order to resolve project and material-specific questions.
- E. Submit three (3) copies of an applicator's proposed guarantee of workmanship for a period of one year from the date of substantial completion.
- F. Submit three (3) copies of Underwriter's Laboratory (UL) Classification that the encapsulant is currently classified with UL in good standing, and that when evaluated by UL in accord with UL 723, the flame spread and smoke development has each been determined not to exceed a rating of 15. [N.B., The UL723 test standard has been approved by the American National Standard Institute (ANSI) as Standard A2.5, and the National Fire Protection Association as NFPA 255].
- G. Submit three (3) samples of product finished at or greater than film thickness at which ASTM E 1795 compliance was achieved. Such sample may be provided on a standard coatings industry drawdown card or a rigid substrate. Submit samples that represent actual product, color, and sheen. Custom and/or project specific special colors shall be sourced for submittal directly from the manufacturer or from a distributor authorized to tint the encapsulant. Field tinted samples will not be acceptable for submittal or general application.

- H. Submit three (3) copies of manufacturer's Safety Data Sheets (SDS). Encapsulant content of VOCs may vary by color, but shall not exceed 100 g/l. (calculated per 40 CFR 59.406). Only submit complying products based on project requirements (e.g., LEED). Compliance is also required with other pertinent regulations regarding VOCs (CARB, OTC, SCAQMD, LADCO). To ensure compliance with district regulations and other rules, businesses that perform coating activities should contact the local district in each area where the coating will be used.
- I. Submit three (3) sets of documentation available from encapsulant manufacturer indicating that the encapsulant composition has been independently reviewed by a certified toxicologist, that the encapsulant has been determined to be non-toxic, and that the encapsulant has been formulated with an EPA accepted and FDA approved, bitter tasting anti-ingestion agent.
- J. Submit three (3) copies of batch numbers from containers of material to be applied before Approved Encapsulant is installed. Owner, Client, Architect or Engineer will decide on a by-project basis if/which party is to retain this information. Such information must be retained and available (if applicable) during a warranty period has been extended by the manufacturer to the project.
- K. Encapsulant Maintenance Manual: Upon conclusion of the project, the Installer and/or encapsulant manufacturer/supplier shall furnish an encapsulant maintenance manual. Manual shall include an Area Summary with finish schedule*, Area Detail designating where each product/color/finish was used*, Technical Product Data Sheet (TDS)**, Safety Data Sheets (SDS)**, care and cleaning instructions, touch-up procedures, and contact information for manufacturer's local representation should assistance be required**. [Items marked with a * are expected from the Installer; Items marked with ** are expected from the encapsulant manufacturer.]

Notes:

- a) Bidders are encouraged to submit materials that meet the Basis of Design. In order to have a material accepted as an Approved Encapsulant for the work outlined herein the items listed in this section 1.04 A-K must be received by the architect for evaluation and approval no less than 21 days prior to the original published bid date. Approved Encapsulants will be by Addendum only. Submittals circumventing this process will not be approved and will not be acceptable for inclusion in this project. Alternative/substitution products considered in accordance with provisions of Section 01 60 00 of this specification.
- b) Only submit complying products based on project requirements (e.g., LEED). One must also comply with the regulations regarding VOCs (CARB, OTC, SCAQMD, LADCO). To ensure compliance with district regulations and other rules, businesses that perform coating activities should contact the local district in each area where the coating will be used.
- c) Substitutions will only be considered for products manufactured by companies of primarily U.S. ownership, and when the proposed substitute product is "all or virtually" all manufactured in the United States (in accord with the Made in USA Standard of the Federal Trade Commission (FTC).

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and product number (as well as minimum information detailed at Section 2.01, Subsection C of this specification).
- B. Storage of materials:
 - 1. Store only acceptable project materials on site.

2. Store in suitable location convenient to progress of work.
3. Comply with health and fire regulations.
4. Storage temperature shall be between 40 F (4.5 C) and 90 F (32 C), or such other ambient temperature conditions as may be specifically recommended by product manufacturer.
5. Encapsulants shall not be permitted to freeze on site, and delivery of encapsulant should be refused if freezing during transit is probable.
6. Avoid storage directly in hot sun exposures.
7. Keep containers tightly closed when not in use.
8. Keep out of reach of children.

C. Handling:

- a. Dispose of water-based and solvent-based materials, encapsulant and supplemental products, in accordance with requirements of local authorities having jurisdiction.
- b. Verify that encapsulant and supplemental products are within acceptable shelf life, and do not utilize any product that is older than the maximum shelf life stated by the manufacturer.

D. Extra Materials:

- a. Furnish extra encapsulant materials in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
- b. Furnish Owner with an additional one percent of each material and color, but not less than 1 gal (3.8 l), pail (19 l), or 1 case, as appropriate and collectively agreed upon in advance of substantial completion.

1.06 JOB CONDITIONS

A. Environmental requirements

1. Comply with manufacturer's recommendations as to environmental conditions under which encapsulant coating systems can be applied.
 - a. Temperature:
 - i. At Application: Surfaces to be coated and ambient air temperature shall be between 45° F (7.2° C) and 100° F (38° C). Do not apply encapsulants at temperatures beyond those limits stated in the manufacturer's technical data sheet unless given written permission by the manufacturer.
 - ii. After Application: Site temperature shall remain within the manufacturer's acceptable range for no less than twenty-four (24) hours post-application.
 - iii. Fluctuating Conditions: When temperatures are expected to be consistently in the cooler segment of the acceptable range (<50 F), or temperatures are expected to fluctuate significantly, multiple thin applications with dry time in between is advisable versus a single application. Supply of air movement may be recommended to aid curing when site conditions are minimal for application.
 - b. Humidity:

- i. Ideal humidity for encapsulant application is 40-50% Relative Humidity (%RH).
 - ii. Humidity in excess of 70% RH will slow the drying and curing of encapsulant coatings. Application of multiple thin coats, and/or supply of air movement may be recommended when site conditions are minimal for application.
 - iii. Do not apply encapsulant when the Relative Humidity is above 85% or when the Dew Point is closer than 3 degrees to the ambient air temperature.
 - 2. Surface/Substrate Moisture:
 - a. Do not apply encapsulants when precipitation can be reasonably expected to directly contact the curing film within 24 hours after application.
 - b. Consult manufacturer regarding whether topical dampness (latent moisture tangible by touch) after wet cleaning or recent precipitation is acceptable at time of application, or if a completely dry substrate's surface is required. At no time should encapsulants be applied where significant topical moisture is present (such as droplets, "beading" water). Applicators are expected to account for slow-drying surface elements (such as shaded areas, hairline cracks, nail holes).
 - c. Do not apply encapsulants when wood substrates exhibit a subsurface moisture content in excess of 11%.
 - B. Surface Protection/Prevention of Cross-Contamination:
 - 1. Cover or otherwise protect finished work from activity of occupants and/or of other trades, and surfaces not being coated concurrently or not to be coated.
 - 2. Do not apply encapsulants in areas where dust or other airborne particulate matter is being generated. Avoid cross-contaminating encapsulation areas with airborne particulate from areas of surface preparation and demolition. Such particulate may contain lead and other hazardous contaminants.
 - E. Provide adequate illumination and ventilation during application.
- 2.00 PRODUCTS
- 2.01 MATERIALS (Basis of Design)
- A. L-B-C LEAD BARRIER COMPOUND – (TYPE III INTERIOR/EXTERIOR), Product ID: 5800-5 (Antique Linen), 5801-5 (Tintable White), 5802-5 (Black). Manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com [or equal]
 - a. Key Performance Attributes of Encapsulant
 - i. Exposure: Interior/Exterior
 - ii. Dry Film Thickness Compliance to ASTM E 1795 (Interior Use): 7 mils DFT
 - iii. Dry Film Thickness Compliance to ASTM E 1795 (Exterior Use): 7 mils DFT
 - iv. Finish: Matte
 - v. Specular Gloss: $5.5^{\circ} \pm 1 @ 60^{\circ}$
 - vi. Volume Solids: $45.0\% \pm 2$
 - vii. Weight Solids: $59.0\% \pm 2$

- viii. Viscosity @ 77°F: 95-120 KU @ 70°F
- ix. Maximum VOC: 88 g/l
- x. Flame Spread (UL 723): 0
- xi. Smoke Development (UL 723): 0
- xii. Contains FDA-approved Anti-Ingellant: Yes (Bitrex®)
- xiii. Underwriter's Laboratories (UL®): Classified

B. Specific surface preparation products, and topcoats/finishes may be incorporated into a project specific system. Encapsulant and supplementary product systems shall be applied in accordance with manufacturer's instructions and these specification documents. Unless an alternative product is submitted to the Architect/Engineer and deemed acceptable (see Section 1.04, Note "a" of this specification), supplementary materials (topcoats, primers, caulking/foam) only of type and from a source recommended by the manufacturer (of the encapsulant) shall be used.

C. Ensure inclusion on labels of containers of encapsulant and all supplementary products:

1. Product name, and type (description).
2. Batch Number
3. Manufacture date.
4. Product SKU
5. Color number/identification

2.02 COLORS

- A. Colors shall be selected by the Architect/Engineer/Owner's Agent from Manufacturer's standard palette of not less than 3 standard solid colors. (Also, see 1.04, subsection G *Submittals*).
- B. Clear encapsulants for lead-based paint are not acceptable. Current minimum performance standards (E.g., requirements of ASTM E 1795) preclude any viable clear lead encapsulants. For guidance on management of lead-containing substrates with minimal appearance alteration, contact the encapsulant manufacturer for alternatives to this specification.
- C. Custom Colors:
 - a. Custom colors may be required by the Owner or Architect/Engineer for aesthetic and/or historic/preservation concerns.
 - b. Evaluation and approval of custom color submittals shall be conducted in accord with Section 1.03, Subsection D3 of this specification (Custom Colors).
 - c. Pastel Colors: Some encapsulant manufacturers can provide products which may be ready-to-use as white, and which also may be tinted from white to pastel colors. When this capability is available:
 - i. Tinting to pastel colors shall be executed only by the manufacturer or a distributor authorized to tint the encapsulant.
 - ii. No more than 2 ounces of tint per gallon may be added to the encapsulant, unless expressly instructed in writing in advance by the manufacturer.
 - iii. Tints added must be specifically recommended by the manufacturer (generic type, pigment strength, and tint manufacturer's brand).
 - iv. Field tinting is never permitted, unless expressly instructed in writing in advance by the manufacturer.
 - d. Deeper Than Pastel Colors: may only be supplied directly from the manufacturer.
 - e. The required performance warranty, as required by this specification, as well as any performance expectation, suitability for use, or similar, will be invalidated by unauthorized tinting of the encapsulant, and results in the installer being in abrogation of responsibility for adherence to this specification.

2.03 MIXING

- A. Accomplish job mixing and application only when acceptable to the Architect/Engineer.
- B. Mix components only in containers furnished or approved in writing by the Manufacturer.
- C. Mix encapsulant thoroughly, preferably with an electric drill mounted device designed for blending liquid coatings. When a clear liquid is present in the headspace when container is opened, installer is to consider that liquid an integral part of the product, and such liquid must be mixed in completely (unless the encapsulant manufacturer expressly instructs otherwise)/
- D. Thinning or diluting of the encapsulant is not permitted, unless expressly instructed in writing in advance by the manufacturer.

3. EXECUTION

3.01 EXAMINATION

A. PRE-WORK VISUAL INSPECTION

- a. Visually examine surfaces to be encapsulated. The purpose of the visual inspection is to evaluate existing surface conditions and determine how to properly encapsulate in accordance with this Specification. If the surface cannot be put into an acceptable condition, as described within this Specification for the particular substrate type and/or surface conditions, do not encapsulate.
- b. Examine surfaces scheduled to receive encapsulant for conditions that will adversely affect execution, permanence or quality of work and which cannot be put into an acceptable condition through preparatory work as included in 3.02. PREPARATION OF SURFACES.
- c. Notify Owner's agent immediately upon determination that surfaces scheduled to receive encapsulant are unacceptable for proper adhesion or subsequent performance. If substrate preparation is the responsibility of another installer, notify Owner's agent of unsatisfactory preparation before proceeding.
- d. Do not proceed with surface preparation or encapsulant application until conditions are suitable. Work should commence only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.
- e. Do not proceed with surface preparation and application without first consulting with federal, state and local authorities for specific work practice guidelines and safety procedure information for that jurisdiction.
- f. During the visual inspection of surfaces, direct special attention to doors, windows and other surfaces that may receive repeated friction or wear from ordinary operation. Components of doors and windows that do not receive friction and abrasion during ordinary operation (e.g., casing, muntins, mullions, jalousies) may be encapsulated in accordance with this Specification for the particular substrate type and/or surface conditions.
 - A. Avoid encapsulating surfaces that may receive repeated friction or wear from ordinary operation, unless it is possible to prepare the surface in a manner that eliminates the source of the friction or wear.
 - 1. Paint can be removed from the edges of a door or window by sanding or planing the edges within a contained area that has been properly constructed

- per HUD, EPA and OSHA rules and regulations for the control of lead-containing dust. Such a temporary containment area shall be constructed with negative pressure, HEPA filtration, and decontamination at entrance/exits as required by the project jurisdiction.
2. Paint on friction surfaces can be removed in a non-dust generating manner by using a chemical paint remover such as Fiberlock brand Piranha® or NexStrip™ chemical removersⁱⁱ.
- B. The surfaces of a door that are frequently abraded include, but are not limited to the doorstop, threshold, and limited surface area of the door, which meets these surfaces during ordinary operation. Additional options for door systems:
1. Rubber pads may be used to eliminate contact between doors and doorstops where practicable.
 2. The plumb of door systems may also be altered to ensure the only impact is strictly between the striker and strike plate.
- C. The surfaces of a window that are frequently abraded include, but are not limited to the channels, sash edges, top rails, meeting rails, etc. Additional options for window systems:
1. Vinyl inserts or similar barriers can also be attached to the friction surfaces of a window.
 2. Casement and louver/jalousie window systems have components that move into contact, but generally without significant impact force or friction, and as such may be encapsulated. Rubber pads may be used to eliminate contact between window elements where practicable.
 3. Operational window shutters can be addressed similar to door systems. Impact points should have paint removed, then impact and non-impact areas (such as jalousies) can be encapsulated.
- D. Floors can be encapsulated under certain conditions. Consult a technical specialist from the encapsulant manufacturer for specific instructions and guidance when attempting to encapsulate floors. Encapsulation of lead-based paint on floors generally is addressed by the manufacturer in a different specification.

NOTE ON 3.01, B: The surface assessment procedures described herein may differ across states and provinces. Project sponsorship and funding may also trigger specific preferred surface assessment metrics, such as projects involving the U.S. Department of Housing and Urban Development (HUD). Requirements regarding who may conduct surface assessment such as described in 3.01 B (below), as well as documentation requirements, can also vary per jurisdiction. Always check with local authorities for specific surface assessment requirements.

B. PRE-WORK SURFACE ASSESSMENTS

a. ADHESION TAPE TEST:

- A. Description: Following the visual inspection, use the procedure outlined below to perform an adhesion tape test. A tape test involves the application of pressure sensitive tape to the paint system, then removing the tape and measuring the paint removed by the tape, if any. Surfaces to be evaluated should be appropriately clean, dry and sound as if prepared for encapsulation
- B. Purpose: The purpose of the adhesion tape test is to determine the intercoat adhesion of the existing paint system.

- C. Tools Required:
 - 1. Tape: two (2") inch wide, pressure sensitive adhesive clear tape.
 - a. Recommended: 3M 600 or equivalent.
 - b. Not recommended: duct tape, opaque packing tape
 - 2. Pencil with rubber eraser.
 - 3. Resealable plastic storage bags
 - 4. Permanent Marker
 - D. Conducting Adhesion Tape Test:
 - 1. Apply a 6 - 10" strip of pressure sensitive adhesive tape.
 - 2. Burnish the tape down on surface with the rubber eraser end of a pencil.
 - 3. After 90 seconds, remove (do not yank) the tape by pulling smoothly and slowly back upon itself at as close to a 180° angle as possible.
 - E. Evaluation of Adhesion Tape Test:
 - 1. If more than a square inch of paint is removed along with the tape, the inter-coat adhesion of the existing paint system is poor and surface preparation (i.e. wet sanding, scraping, cleaning, etc.), must be administered to remove layers that are poorly adhered before applying a primer or the encapsulant.
 - 2. If less than a square inch of paint is removed from the substrate, the surface is sound and can be encapsulated.
 - 3. Tape can be retained in plastic bags to be labeled with location, time and date, name of project; and filed with project documents.
- b. ENCAPSULANT PATCH TEST:
- A. Description: The encapsulant patch test is a small-scale application of encapsulant to an area or areas representative of the surface to be encapsulated. An encapsulant manufacturer may consider a patch test mandatory or optional. Check with the manufacturer. Performance of an encapsulant patch test should be performed at the discretion of the installer, or by Owner's agent, Client, Enforcement Authority, Architect or Engineer.
 - B. Purpose: Conduct a patch test if there is any question concerning surface conditions that may interfere with encapsulant performance (e.g., adhesion interference due to unstable existing paint systems, excessive gloss sheens, surface contaminants (mold, soot), or repellent chemical residues, such as alkalinity, grease, oils.), excessive substrate moisture content; or conditions that might generate unsatisfactory aesthetics (e.g., migrating or "bleeding" stains)). Surfaces to be evaluated should be appropriately clean, dry and sound as if prepared for full-scale encapsulation.
 - C. Note: Certain states require the performance of a patch test prior to application.
 - D. Tools Required:
 - 1. Tape: two (2") inch wide, pressure sensitive adhesive clear tape.
 - a. Recommended: 3M 600 or equivalent.
 - b. Not recommended: duct tape, opaque packing tape
 - 2. Pencil with rubber eraser.

3. Resealable plastic storage bags
 4. Permanent Marker
 5. Small liquid (wet) sample of the candidate encapsulant product
 6. Wet film thickness gauge
 7. Application and cleaning tools as needed (brush, roller)
- E. Conducting an Encapsulant Patch Test: An encapsulant patch test may be performed using the following procedures:
1. Choose a 6"x6" area of a surface representative of those to be encapsulated. If working on trim or other narrow components, the shape of the patch may change provided the same area (36 square inches) is encapsulated for the test.
 2. Patch tests may be conducted where deemed necessary (i.e., one per room, or one per type of architectural element present in the dwelling) or as required by relevant state rules and regulations concerning the proper use of lead-based paint encapsulants.
 3. Apply encapsulant in accordance with the instructions within this Specification for the substrate type and existing paint conditions present.
 4. Use a wet film thickness gauge to ensure proper application to the minimum wet film thickness specified by the manufacturer.
 5. Allow the encapsulant to cure substantially (but not necessarily to total cure) before evaluating performance. Under ideal ambient conditions (78°F (air and substrate) and 50% relative humidity) curing sufficiently to evaluate the patch test may take 4-10 days. Consult the manufacturer for product specific guidance. Cure can be accelerated by using forced ambient or warmed air.
 6. Visually Evaluating Encapsulant Patch Test: Examine the patch for defects.
 - a. Bubbling may indicate chemical contamination of the surface that must be removed by more thorough cleaning.
 - b. Cracking may indicate inadequate temperatures for proper curing, surface contaminants, or other environmental conditions not conducive to application of an encapsulant or any topical coating (paint).
 - c. Stains generated within the encapsulant film subsequent to application may indicate a source of water-soluble pigment on or within the surface that must be blocked using a primer recommended by the manufacturer. Choose a primer or sealer appropriate for the substrate type and the perceived source of the pigmentation.
 - d. When visual defects are noted in the cured patch test, remedy the source condition that was likely to have generated those defects, and retest.
 7. Evaluating Adhesion of Encapsulant Patch Test:
 - a. Perform an adhesion tape test on a fully cured patch test in accordance with the description in section 3.01.B.a of this Specification.

- b. If delamination occurs (i.e., encapsulant or encapsulant and some of the underlying paint is present on the tape, and the encapsulant has not cured under ideal conditions, allow more time to elapse then retest.
- c. Failure of the test patch does not indicate that the candidate encapsulant may not be used to encapsulate the surface in question
- d. Failure of any encapsulant test patch indicates that additional surface preparation procedures are necessary for successful application

***IMPORTANT NOTE: SEVERELY DETERIORATED PAINT SYSTEMS SHOULD NOT BE ENCAPSULATED UNLESS** they can be rendered sound through proper surface preparation. It is frequently advisable (and is required in several states) to employ the services of a certified lead abatement contractor when extensive dust generating surface preparation procedures are necessary.

CAUTION NOTICE: Dry sanding, scraping and other surface preparation procedures can create toxic dust and hazardous waste. A HEPA (High Efficiency Particulate Air) vacuum should be used on all surfaces to remove hazardous dust and particles. Use MSHA/NIOSH approved or equivalent respiratory protection suitable for concentrations and types of air contaminants encountered.

3.02 PREPARATION OF SURFACES

- A. GENERAL SURFACE PREPARATION INSTRUCTIONS FOR ALL SUBSTRATES: All surfaces to be encapsulated should be properly prepared so that all are clean, dry, sound and deglossed at the time of application.
- a. Wash all areas to be encapsulated with manufacturer approved lead-specific surface cleanerⁱⁱⁱ. Clean to the extent required to remove existing deteriorated coatings and any other foreign matter, paying particular attention to areas found under structural components such as eaves, beams, archways, etc.
 - b. If necessary, oil, grease and similar surface contamination should be removed with any manufacturer-approved degreasing surface cleaner which is free-rinsing and does not require a neutralizer^v.
 - c. Rinse surfaces with clean water. Avoid uncontrolled release of rinsate beyond the work area, as it may contain lead. Jurisdictional regulations for management of rinsate (collection and disposal of waste liquids) can vary, and project-specific requirements are the responsibility of the installer.
 - d. On representative surfaces, perform a "water-break" test to determine if traces of oil, grease and similar hydrophobic contaminants are still present.
 - i. Wet a portion of the surface with clean water by splashing to induce runoff in a sheeting action. If water "beads", oil and/or grease is still present, and the washing and/or rinsing procedure must be repeated.
 - ii. Water-break tests can be difficult for architectural elements involving complex geometry, including acute angles, undercuts and overhangs. Examine such areas

carefully by eye and touch to detect whether hydrophobic residues remain present.

- e. Surfaces contaminated with mold, mildew and/or other contaminant microorganisms (e.g., biofilms) should be examined carefully for sources of excess moisture and water-damage, and then thoroughly cleaned.
 - i. Active, visible mold growth is frequently an indicator of higher than normal moisture that may require correction prior to encapsulation.
 - 1. Mold Remediation is a professional contractor discipline to address mold and return a structure to normal operating conditions. Contact the regional Fiberlock area manager for more information when mold remediation may be necessary prior to lead encapsulation.
 - ii. Clean mold and mildew from surfaces to be encapsulated. Oxidizing cleaners reactive with organic contaminants, formulated with hydrogen peroxide^v, can provide a more effective and thorough cleaning and removal.
 - 1. Avoid using bleaches for mold removal.
 - 2. Avoid using cleaners for mold removal that require a rinse.
 - iii. Kill residual mold after cleaning with application of an EPA-registered disinfectant/sanitizer.^{vi}
 - iv. Mold-stains present after cleaning may migrate or “bleed” into the encapsulant film, negatively affecting intended appearance of the final project. Mold stain specific stain removers formulated with hydrogen peroxide or sodium hypochlorite can be effective in removing stains^{vii}.
 - f. Thick and sharp edges of paint build-ups, runs and sags should be wet sanded smooth to achieve a feathered edge.
 - i. Note that depressions or “cratering” where loose paint was removed will contrast with areas where existing paint continued to adhere. An encapsulant will only partially smooth such surfaces. Also referred to as “step-ups and step-downs”, these surface variations will not adversely affect performance of a lead provided the entire surface is coated with equal to or in excess of the required dry film thickness for the encapsulant used.
 - ii. Repair and wet sand smooth surface defects to the extent required by Owner, Client, Architect or Engineer.
 - iii. Always avoid dry sanding any lead-containing surfaces as this may increase lead exposure.

- g. Fill minor surface voids (e.g., isolated hairline cracks) with appropriate caulk or patching compound and smooth off to match adjacent surfaces. Review filler or caulk before use to ensure the product will accept a water-based coating.
 - i. Larger surface voids may require using spray foam to fill, and smooth off to match adjacent surfaces^{viii}.
- h. High-Sheen/Gloss Surfaces: A good profile (roughened surface) must be developed on high gloss or smooth, sound surfaces in order for an encapsulant to sufficiently adhere to the substrate. To reduce sheen and provide a profile that permits encapsulant adhesion
 - i. Wet sand gloss surfaces, and/or;
 - ii. Wet clean and scour with detergent;
 - iii. Utilize a commercially available liquid deglosser formulated to etch high-sheen surfaces. Use deglossers strictly in accordance with the manufacturer's instructions for that product.
- i. If cleaned and dry surfaces continue to exhibit loose particulate residues, such as chalking, dusting, attempt to remove post-cleaning residues with a HEPA vacuum.
- j. Surfaces can continue to be dimensionally unstable after removal of deteriorated paint and proper cleaning, but may still be eligible for encapsulation. Common conditions in such situations can include minor spalling, chalking and "running edges" (chronic peeling at paint edges after each cleansing and clean water rinse cycle) along otherwise adhered paint systems. It can be possible to stabilize these situations by applying a surface stabilizing bonding agent/primer^x. To determine if a bonding agent is a viable solution, test applications must be conducted as part of an Encapsulant Patch Test, in accord with Section 3.01.B.b of this specification.
- k. Surface Drying After Cleaning:
 - i. Allow surface to dry before applying an encapsulant.
 - ii. The extent of drying after cleaning may be product specific, and specific guidance will be available from the manufacturer.
 - iii. When sub-surface moisture is a concern, use a moisture meter designed to evaluate residual moisture content left behind by cleaning or precipitation in that substrate type. Generally, lead encapsulants do not efficiently permit trapped moisture to migrate through the encapsulant film. Apply encapsulants only when conditions measured are within the dry (lower moisture) end of the paintable range per the moisture meter used.

B. SURFACE PREPARATION INSTRUCTIONS FOR SPECIFIC SURFACES:

A. WOOD

- i. Water-soluble Stains: Surfaces which exhibit water-damage, or highly-pigmented woods (including, but not limited to redwood, cypress, cedar, and/or knots in most wood substrates) rendered bare by deterioration of existing paint or by surface preparation should be primed with a stain-blocking primer^x.
- ii. Rust: Wood substrates containing nails or other metal fixtures which may cause a migrating or "bleeding" rust stain should be spot-primed with a rust inhibiting primer.
- iii. Rot (Wood Decay Fungi): Old, weathered wood that is moist and spongy is attributable to "damp" or "wet" rot. Areas that are dry and crumbly are referred to as "dry rot." Both dry and damp rot are caused by microorganisms that must be removed to prevent the rot from spreading. Cut away the rot affected wood plus several inches beyond the perimeter of the rot damage. Apply an EPA-registered disinfectant/sanitizer that includes fungicidal capability^{xi} and instructions on the product label. Patch-in or plug removed areas with rot-free, new wood. Or replace entire components with rot-free replacements.

B. CONCRETE, MASONRY, STUCCO, BRICK, CONCRETE BLOCKS, ETC.:

- i. Remove surface dust. Steam-cleaning and/or a high-pressure-water system may be used for cleaning. Such a system must adequately remove dirt and chalk from the surface without damaging the substrates or adjacent areas.
- ii. Remove efflorescence (a growth of salt crystals on a surface caused by evaporation of alkali/salt-laden water). Efflorescence indicates the presence of alkaline surface residues that may interfere with the adhesion of any topically-applied coating.
 1. Since alkaline residues may persist after ordinary cleansing, check suspect areas with pH indicator paper suitable for detecting surface pH in the 1-12 range. Follow the manufacturer's instructions for the proper use of pH indicator paper, and use distilled water whenever possible to avoid analysis biased by acidic tap water.
 2. If a highly-alkaline surface pH is detected, apply a manufacturer-recommended acid wash solution designed to neutralize alkaline surface conditions^{xii}. Rinse neutralizer residue with clean water and permit the surface to dry. Retest with pH paper after neutralization, and repeat process as necessary before encapsulation.
- iii. If surfaces continue to spall and/or exhibit chalk after thorough and repeated cleaning, apply a masonry conditioner^{xiii} to bind up loose surface particulate matter. Consider an Encapsulant Patch Test to determine whether a masonry conditioner or other primer coat is necessary.
- iv. Surfaces which exhibit water-damage, discoloration, or highly-pigmented bare brick or masonry substrates should be primed with a stain-blocking primer^{xiv}. Some masonry conditioners can also block some potentially migrating stains.
- v. Concrete floors are not covered in this specification. For information on encapsulating lead-based paint on concrete floors, consult a Fiberlock Area Manager.

- vi. For below-grade applications to cementitious substrates such as concrete, conduct multiple Encapsulant Patch Tests, and observe tests for a longer than normal evaluation period. Below-grade applications can be impacted by hydrostatic pressure and water-vapor transmission through substrates on the perimeter of a foundation. Generally, lead encapsulants do not efficiently permit moisture to migrate through the encapsulant film.
- vii. Brick (especially, red, brown) can contain iron and other mineral compounds which can migrate into an encapsulant topcoat creating a bleeding stain similar to a rust stain. Bare brick, especially dark color brick, may need to be sealed with a stain blocking primer or masonry conditioner.
- viii. Previously applied waterproofing/dampproofing membranes and coatings can be hydrophobic and interfere with the adhesion of an encapsulant.

C. PLASTER, GYPSUM WALLBOARD

- a. All surface defects shall be filled, wet sanded and spot primed with a masonry conditioner, stain blocking primer, or equivalent sealant/undercoat.
- b. Gypsum wallboard exhibiting "nail-popping" shall be repaired, filled, wet sanded and spot-primed with a 100% acrylic rust-inhibiting universal surface primer prior to encapsulating.

D. SURFACE ASSESSMENT & PREPARATION FOR METAL SURFACES: Note: The proper encapsulation of lead-based painted metal surfaces will require the determination of the degree of deterioration, the expected severity of exposure, and any information available on the type of coatings previously used.

- a. Degrees of Deterioration of Painted Steel Surfaces: Use the ASTM Method D160 or "SSPC Guide to Visual Standard No. 2 for Evaluating Degree of Rusting on Painted Steel Surfaces". The degree of rusting shall be correlated as follows:

Sound Paint System	9 - 10
Slight to Moderately Deteriorated Paint System	6 - 8
Severely Deteriorated Paint System	0 - 5

- b. Ferrous Metal: The surface preparation of any ferrous metal depends not only on its condition, but also on the severity of the environment. For descriptive purposes, two will be referred to in this specification: Severe Exposures and Domestic Atmospheric Exposures.
 - i. Severe Exposures: Circumstances that affect the coatings to extremes are marine atmospheric conditions, immersion, brackish water exposure, chemicals, and similar severe environments. This would include sewage treatment plants, water tanks, etc. If the steel was not properly prepared on the previous painting, such preparation must be accomplished before applying an encapsulant. Specifically, sharp edges, protruding welds, and weld splatters must be ground smooth before application of an encapsulant.
 - 1. Grease, rust, scale, dirt and dust must be removed as follows:
 - a. Remove rust and scale by wet wire brushing and wet sanding. Always avoid dry wire brushing or sanding any lead-containing surfaces as this may increase lead exposure.

- b. Remove dust, dirt, oil and grease. Clean surfaces using a manufacturer-approved degreasing surface cleaner which is free-rinsing, and does not require a neutralizer^{xv}.
 - c. Perform a water-break test per Section 3.02 Subsection A.d of this specification to determine if oil and grease have been removed. Repeat if necessary. Apply phosphoric acid solution. Let set as recommended by acid etch manufacturer. Rinse with clean water. If water “beads-up” on the surface, oil and/or grease is still present and cleaning process must be repeated before applying
 2. When cleaned ferrous metal surfaces are thoroughly dry, immediately apply a manufacturer-approved rust inhibiting metal primer^{xvi} to prevent “flash” rusting.
- ii. Domestic Atmospheric Exposures: These conditions are less severe and generally dryer than those explained under the “Severe Exposure” section above. Investigate the soundness of any existing coatings to determine the amount of surface preparation that is necessary and desirable. If the steel was not properly prepared on the previous painting, it must be accomplished before applying an encapsulant. Specifically, sharp edges, protruding welds, and weld splatters must be ground smooth before repainting. Grease, rust, scale, dirt and dust are required to be removed as follows:
1. Remove rust and scale by wire brushing and wet sanding. Always avoid dry wire brushing or sanding any lead-containing surfaces as this may increase lead exposure.
 2. Remove dust, dirt, oil and grease. Clean surfaces using a manufacturer-approved degreasing surface cleaner which is free-rinsing, and does not require a neutralizer^{xvii}.
 3. Perform a water-break test per Section 3.02 Subsection A.d of this specification to determine if oil and grease have been removed. Repeat if necessary. Apply phosphoric acid solution. Let set as recommended by acid etch manufacturer. Rinse with clean water. If water “beads-up” on the surface, oil and/or grease is still present and cleaning process must be repeated before applying
 4. When cleaned ferrous metal surfaces are thoroughly dry, immediately apply a manufacturer-approved rust inhibiting metal primer^{xviii} to prevent “flash” rusting.
- c. Galvanized Metals: Remove all oil, grease, dirt, loose or scaling paint, mil scale and other foreign matter by wire brushing and wet sanding. Always avoid dry wire brushing or sanding any lead-containing surfaces as this may increase lead exposure. Surface oil should be wiped off with mineral spirits and a clean rag. Perform a water-break test per Section 3.02 Subsection A.d of this specification to determine if oil, grease and residual mineral spirits remain on the substrate. When thoroughly dry apply a manufacturer-approved rust inhibiting metal primer^{xix} to any areas where galvanization has been lost due to exposure and/or cleansing, and encapsulants would be applied directly to bare

metal. Previously painted galvanized substrates may not need to be primed except for spot areas where the encapsulants would be applied directly to bare metal.

d. Copper:

- i. Copper will readily accept encapsulants and preparation requirements entail only a thorough cleaning. Perform solvent degreasing as above, followed by application of a “tie-coat” adhesion enhancing primer.
- ii. Lead-coated copper and similar cladding and ornamental materials can be encapsulated. However, specialized cleaning and application of a vinyl butyral wash primer (or similar) requires a separate specification available from Fiberlock.

e. Aluminum:

- i. Remove rust and scale by wire brushing and wet sanding. Always avoid dry wire brushing or sanding any lead-containing surfaces as this may increase lead exposure.
- ii. Wash all areas to be encapsulated with manufacturer approved lead-specific surface cleaner^{xx}. Clean to the extent required to remove existing deteriorated coatings and any other foreign matter, paying particular attention to areas found under structural components such as eaves, beams, archways, etc. Cleaner should be mildly acidic (pH 5-6), TSP-free (no trisodium phosphate) free-rinsing, and does not require a neutralizer. In some cases, a degreaser may also be needed to remove stubborn oils, grease and similar contaminants. Under certain circumstances, it may be necessary to develop a profile by mechanical means such as power tool cleaning.
- iii. When cleaned aluminum metal surfaces are thoroughly dry, immediately apply a manufacturer-approved rust inhibiting metal primer^{xxi} to prime rust post cleaning on ferrous metal architectural components (such as nail &/or screw heads, fasteners, etc.), and to prevent “flash” rusting.
- iv. To ensure adhesion, prime entire lead painted and bare aluminum surface that is required to be encapsulated, to achieve proper bond. Primers utilized shall be water-based, urethane modified, acrylic primer-sealers^{xxii}.

3.03 APPLICATION

- A. Apply encapsulant only after the surface has been examined, assessed, prepared, cleaned, primed and dried, as outlined in the surface assessment and preparation sections of this specification (sections 3.01 and 3.02). Application of encapsulant to surfaces that are not clean, dry, sound, deglossed and properly primed as described will void all warranties.
- B. Apply encapsulant at a wet mil film thickness that will yield the recommended minimum dry mil film thickness at which the submitted testing to ASTM E 1795 documents compliance with performance requirements mandated in regulations (see Submittals Section 1.04, Subsection E).
- C. Wet mil film thickness should be measured throughout any encapsulation project using a wet mil gauge
 - a. Wet film thickness gauges are available upon request and at no charge from the manufacturer of the lead paint encapsulant.

- b. Another method to assure that a minimum dry film thickness is achieved, is to tape a panel (with a predetermined thickness), to the area being coated so that it receives the same treatment as the surrounding area. Once the film dries the panel should be measured again using a micrometer or dial caliper. Subtract overall thickness from the panel thickness to determine the dry film thickness.

3.03 METHODS OF APPLICATION

- A. Airless Spray: Encapsulants can be successfully applied with most major brands of airless spray equipment.

- B. Typical settings for airless spray equipment:

(Reversible) Tip Orifice	Tip Fan Size	Operating Air Pressure	Airless Hose ID	Min. Pump G.P.M.	Hose Length
0.021" to 0.025"	521	1800 - 2000 psi	1/4"	0.50	50' -100'

- C. Technique of Spraying - For best results,

- a. Apply encapsulants in sweeping strokes always keeping the tip of the gun parallel to the surface at a distance between 12" to 18" inches.

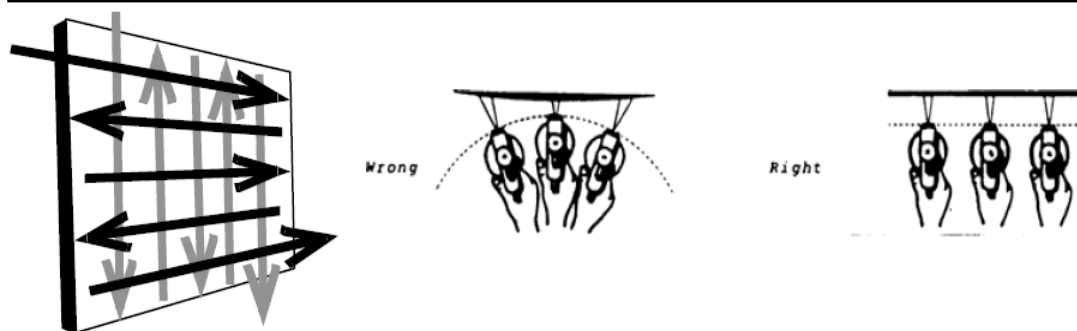


Figure 3. Proper spray application of L-B-C Lead Barrier Compound

- b. The speed at which the product is applied depends on the system used.
- c. Normally a slow to moderate sweeping stroke of first horizontal followed by vertical passes will afford the desired results.
- d. If necessary, an angular mist coat may be applied to even out irregularities.

- D. SPECIAL NOTE FOR SPRAY APPLICATION OF ENCAPSULANTS CONTAINING ANTI-INGESTANTS (DOES NOT PERTAIN TO BRUSH OR ROLLER APPLICATION)

- a. Per this specification, the Architect/Engineer require that the encapsulant contain a non-toxic, bitter tasting anti-ingestion agent.
 - b. When sprayed, anti-ingestion agents have a strong bitter taste even in low concentrations.
 - c. There is no health hazard even if the temporarily airborne particulate is ingested or inhaled. It may cause slight irritation to the nose, mouth and/or throat and therefore as a result, will leave a bitter taste in the mouth. To avoid this discomfort, it is recommended that exposure to the airborne mist be avoided.
 - d. When areas to be sprayed adjoin inhabited spaces, rooms or offices should be closed off. The following procedures can be implemented to assure ventilation in the area to be sprayed and yet prevent airflow containing bitter-tasting mists from affecting adjoining rooms. Place an 18-24" fan (air flow pointed outward) turned on "high" in an open window of the room to be sprayed. Open a door to an adjoining area by no less than 2 inches. This will allow adequate air flow away from inhabited areas and yet allow persons to walk back and forth from the application area to the adjoining rooms.
- E. Roller: For best results apply with a 3/8" - 1/2" nap roller (manufacturer recommendations may vary).
- F. Brush: Apply liberally and uniformly with a polyester or nylon brush.

3.04 CLEANING

- A. Remove debris promptly from work area and dispose of properly.
- B. Remove spilled, splashed, or splattered coating materials from all surfaces.
- D. Do not mar surface finish of items being cleaned.
- E. Wash all work areas to be with manufacturer approved lead-specific surface cleaner^{xxiii}.

3.05 FINISH SCHEDULE

- A. Apply encapsulant systems to all areas shown on the drawings or specified in the Room Finish Schedule.

3.06 WARRANTY

- A. Installer shall provide Owner, through Architect/Engineer, with an acceptable form of warranty against defects in workmanship for a period of one (1) year from date of substantial completion.
- B. Issuance of manufacturer warranty shall be a condition precedent to receipt by Fiberlock Area Manager of completed and signed warranty documentation.
- C. Extent of warranty shall be limited to the repair or replacement of defective surfaces at no cost to the Owner, and for any damage directly resulting from such defects during the warranty period of 20 years. The warranty shall not include any remedy for defects caused by abuse, improper maintenance or operation, or by normal wear, tear and usage.

END OF SECTION

END NOTES (INCLUDES SUPPLEMENTARY SYSTEM PRODUCTS BY NAME)

This section is provided as a courtesy to the specifier or project designer/manager.

This section may be included or excluded in the project specific specification at their discretion

ⁱ ICP Construction provides product training via ICP University. The Fiberlock management team and field representation will designate on a project-by-project basis the ICP University curriculum necessary to be qualified for a specific project. In-person training and/or hands-on instruction may be required at the discretion of the authorized Fiberlock representative. Note that training from ICP University does not replace other training mandated by federal, state or local regulation. Concerning lead paint activities, the contractor is responsible for potential requirements such as EPA lead-safe remediation training (RRP), and/or state-issued lead abatement licensing for firms, supervisors and workers. To access ICP University, contact the Design Services Team at ICP Construction:

Web: www.icp-construction.com/dst

Email: DST@icp-construction.com

Phone: 603-759-8503

ⁱⁱ Example: Piranha NexStrip products are a system of chemical paint removers manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755). For more information: <http://www.fiberlock.com/lead/removers.html>

ⁱⁱⁱ Example: LeadSafe lead dust cleaner manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5496-1-C4 (Gallons) or 5496-Q-C12 (Quarts)).

^{iv} Example: RECON Heavy Duty Cleaner degreaser manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 3027-1-C4 (Gallons)).

^v Example: Advanced Peroxide Cleaner (APC) manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 8314-2.5-C2 (2.5 Gallon) or 8314-1-C4 (Gallons)).

^{vi} Example: ShockWave RTU manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 8316-1-C4 (Gallons)).

^{vii} Example: Instant Mold Stain Remover (IMSR) manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 8317-1-C4 (Gallons)).

^{viii} For additional information and guidance regarding foam products available for encapsulation projects, contact ICP ADHESIVES located at 2775 Barber Road, Norton, OH. (330) 753-4585 <https://www.icpgroup.com/icp-adhesives/>

^{ix} Example: Grip-Tack Multi-Purpose Adhesive & Demolition Lockdown manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 6408-5 (Five-Gallons)).

^x Example: Power Block Interior/Exterior Stain-Blocking Primer manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5450-5 (Five-Gallons)).

^{xi} Example: ShockWave RTU manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 8316-1-C4 (Gallons)).

^{xii} Example: Piranha Neutralizer manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5710-1-C4).

^{xiii} Example: Powerstone Plus Masonry Conditioner/Primer manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5489-5 (Five-Gallons)).

^{xiv} Example: Power Block Interior/Exterior Stain-Blocking Primer manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5450-5 (Five-Gallons)).

^{xv} Example: RECON Heavy Duty Cleaner degreaser manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 3027-1-C4 (Gallons)).

^{xvi} Example: Power Rust Stop 100% Acrylic DTM (direct-to-metal) Primer manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5493-5 (Five-Gallons)).

^{xvii} Example: RECON Heavy Duty Cleaner degreaser manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 3027-1-C4 (Gallons)).

^{xviii} Example: Power Rust Stop 100% Acrylic DTM (direct-to-metal) Primer manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5493-5 (Five-Gallons)).

^{xix} Example: Power Rust Stop 100% Acrylic DTM (direct-to-metal) Primer manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5493-5 (Five-Gallons)).

^{xx} Example: LeadSafe lead dust cleaner manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5496-1-C4 (Gallons) or 5496-Q-C12 (Quarts)).

^{xxi} Example: Fixall F106 Novus Acrylic Primer – (quick drying rust inhibiting acrylic latex flat primer/finish for use over new or sound rusty ferrous metal surfaces), manufactured by FIXALL, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: F106 (Five-Gallons)).

^{xxii} Examples: Grip Coat Bonding Primer; Or, FixAll Grabber Bonding Primer. Both are water-based, urethane modified, acrylic primer-sealers), and both are manufactured by California Paints, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product IDs respectively: GripCoat 50500 (Five-Gallons); Grabber F50700 (Five-Gallons)).

^{xxiii} Example: LeadSafe lead dust cleaner manufactured by FIBERLOCK, a brand of ICP CONSTRUCTION; located at 150 Dascomb Road, Andover, MA. 01810. (800-342-3755) www.fiberlock.com (Product ID: 5496-1-C4 (Gallons) or 5496-Q-C12 (Quarts)).

- The effective encapsulation of any abatement project is contingent upon the competence of the applicator.
- if encapsulated surfaces are damaged, repair and re-encapsulate immediately to prevent exposure to the lead hazard. HUD, EPA and several state governments recommend periodic and/or annual examination of all encapsulated surfaces for damage.
- This specification does not fully describe all the limitations, warnings and precautions related to the products described herein.
- Reference should be made to the Technical Product Data Sheets for complete technical information on all products manufactured by Fiberlock, a brand division of ICP Construction.
- Safety Data Sheets (SDS) should be referred to for health and safety information. Copies of all SDS sheets can be obtained by visiting our website at www.lead-safe.com or www.fiberlock.com

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SECTION 02 83 19.13 LEAD-BASED PAINT ABATEMENT 3.20.18
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