CONNECTICUT DEPARTMENT OF PUBLIC HEALTH
APPLICATION FOR LEAD ENCAPSULANT PRODUCT AUTHORIZATION

POLICIES REGARDING PRODUCT AUTHORIZATION

- Information that is confidential **and is so marked** on this form or any submitted supporting documents so marked will be protected from public domain access.

- Use one form per product, authorization is granted only for the product reviewed and approved by the Department of Public Health. If such product can also be used as component of a larger multi-component system, and should authorization be sought for this entire system, authorization must be granted for the other components as well.

- All information submitted is required to adequately evaluate the suitability of the product for authorization. Please note, however, that additional information required to evaluate the product's suitability for authorization may be requested.

REQUIRED DOCUMENTATION

An application for product authorization must include the following:

➔ A completed application form.

➔ Documentation of compliance with the American Society for Testing and Material's (ASTM) Standard Specification for Non-Reinforced Liquid Coating Encapsulation Products for Leaded Paint in Buildings, the American Society for Testing and Material's (ASTM) Standard Specification for Reinforced Liquid Coating Encapsulation Products for Leaded Paint in Buildings or with an appropriate standard of a similar testing organization acceptable to the Commissioner of Public Health. Note: Current listing on the Commonwealth of Massachusetts' "Register of Approved Encapsulant Products" will be accepted as verification of compliance with the ASTM standard for encapsulants for <u>interior</u> use only.

➔ Material Safety Data Sheet (MSDS) for each component of the product.

➔ Material Safety Data Sheet (MSDS) for the cured reacted end product.

➔ Complete product literature.

➔ Product labels per Connecticut Labeling Requirements (attached).

➔ Copies of instruction manuals for surface preparation and product application for this product.

➔ A copy of the report(s) of the required toxicological assessment for the product. Such assessment(s) must be in accordance with the Connecticut Department of Public Health Toxicology Assessment Protocol for Encapsulants of November 12, 1997 (attached).

Send all documents to the following address:

Connecticut Department of Public Health
Lead, Radon and Healthy Homes Program
410 Capitol Avenue, MS# 12LED
P.O. Box 340308
Hartford, CT 06134-0308

If you have questions, please call (860) 509-7299.

LEAD ENCAPSULANT PRODUCT APPLICATION FORM

SECTION 1 - MANUFACTURER INFORMATION

Manufacturer Name:		
Contact Person:	Title:	
Telephone:	Fax:	
Address:		
City:	State:	Zip Code:

SECTION 2 - PRODUCT INFORMATION

Product Name:		Number of Components:	
Reinforcing Materials:			
TYPE: Liquid: ☐ Cementitious: ☐	YEAR FIRST MARKETED:	Flash Point (F°):	VOC:
Gloss/Sheen: High ☐ Semi ☐ Flat ☐	Spread Rate (Sq. Ft. Gallon):	Thinner Type:	
Recommended Application Method (Check all that apply): ☐Brush ☐Roller ☐Spray ☐Trowel ☐Other (Specify)			
Dry Time (Tack Free /Recoat/Full Cure):	Colors Available:		
Clean-Up With:			
Recommended Film/Product Thickness WET:	DRY:		

PLEASE FILL IN APPROPRIATE DATA:

☐ This product has been found to comply with the appropriate American Society for Testing and Materials (ASTM) standard; E 1795-96 for Non-reinforced Liquid Coating Encapsulants for Leaded Paint or E 1791-96 for Reinforced Liquid Coating Encapsulants for Leaded Paint.

Testing Laboratory: _____

Testing Dates: _____/_____/_____through_____/_____/_____

☐ This product has been found to comply with an appropriate standard of a similar testing organization.

Testing Organization: _____

Testing Laboratory: _____

Testing Dates: _____/_____/_____through_____/_____/_____

SECTION 3 - TOXICOLOGY INFORMATION

Please list all ingredients that are in the encapsulant product. Information that is confidential and **is so marked** on this form or any submitted supporting documents so marked will be protected from public domain access.

You must provide a toxicological assessment of your product in accordance with the Connecticut Department of Public Health, Toxicology Assessment Protocol for Encapsulants of November 12, 1997 (attached).

INGREDIENT	CHEMICAL ABSTRACT NUMBER	PERCENT BY WEIGHT**	FOR DPH USE ONLY	
			VOLATILITY Review YES/NO	TOXICITY Review YES/NO

** Indicate percentage weight of ingredient in final product. For example, if the ingredient makes up 10% of a mixture and the mixture is 40% of the final product, then the ingredient percent weight shown in this column is 4%. Note: a range of percent weights or the maximum percent weight possible (e.g. <30%) may be listed.

Attach additional sheets as needed.

SECTION 4 - RECOMMENDED SURFACES

Indicate which components or surfaces are recommended or not recommended for application of this product.

Component * ***with additional preparation or treatment such as (stripping) of impact-friction surfaces. Provide specific additional protocol.***		**List particular substrates/surfaces where the encapsulant is not recommended for use e.g. plaster, metal, etc.**
Walls	☐Recommended ☐Not recommended	
Chair Rails	☐Recommended ☐Not recommended	
Baseboards	☐Recommended ☐Not recommended	
Door Casings	☐Recommended ☐Not recommended	
Window Sills	☐Recommended ☐Not recommended	
Window Aprons	☐Recommended ☐Not recommended	
Window Casings	☐Recommended ☐Not recommended	
Ceilings	☐Recommended ☐Not recommended	
Railings Caps	☐Recommended ☐Not recommended	
Handrails	☐Recommended ☐Not recommended	
Newel Posts	☐Recommended ☐Not recommended	
Stringers	☐Recommended ☐Not recommended	
Radiators	☐Recommended ☐Not recommended	
Curved Wooden Surfaces	☐Recommended ☐Not recommended	
Balusters	☐Recommended ☐Not recommended	
Cabinets (Non-impact Surfaces)	☐Recommended ☐Not recommended	
Drawers (Non-impact Surfaces)	☐Recommended ☐Not recommended	
Doors*	☐Recommended ☐Not recommended	
Shelves*	☐Recommended ☐Not recommended	
Floors*	☐Recommended ☐Not recommended	
Stair Treads*	☐Recommended ☐Not recommended	
Stair Risers*	☐Recommended ☐Not recommended	
Door Jambs/Headers*	☐Recommended ☐Not recommended	
Window Headers*	☐Recommended ☐Not recommended	
Other (list)	☐Recommended ☐Not recommended	

SECTION 5 - PRODUCT USE AND APPLICATION

On a separate sheet of paper, answer the following in clearly marked sections.

5.a Describe procedures to be used to assess or determine if a surface is eligible for encapsulation with this product. Include a description of specific tests to be performed.

5.b Describe surface preparation requirements to be performed before product application.

5.c Describe application patch test procedures.

5.d Describe application procedures and worker protection.

5.e Describe skills and equipment needed to apply this product. Do you provide training? If so, describe. Do you believe your product is suitable for homeowner application? Do you require that application be performed by "certified" or "authorized" individuals?

5.f Detail the temperature and relative humidity ranges required during application. Include conditions that must be avoided.

5.g If more than one coating or application is required, describe procedures to be followed, length of drying time between coats and any special conditions or precautions?

5.h What procedures are used to determine if the first coat has been applied correctly and has cured/dried properly?

5.i What procedures are used to determine if the second coat has been applied correctly and has cured/dried properly?

5.j How long (please be specific) after the encapsulant has been applied can the residents move back in and reoccupy the area where the encapsulant was applied? Are there special restrictions between moving back in and reoccupying the area where the encapsulant was applied and full cure? Are there any limitations with regard to the use of encapsulated fixtures, e.g. radiators?

5.k What are the maximum number of coats and/or thickness of existing old paint over which the product can be applied? Will product failure result if the number of coats or thickness criteria is exceeded?

5.l Can this product be repainted with conventional latex or solvent based paint? What is the length of time or "window" for repainting after product application?

5.m Are there any paint products which <u>should not</u> be applied over this product?

5.n What is the smallest quantity of encapsulant, e.g. 1 quart - 1 gallon available for patch testing or repair of minor defects?

5.o Are there any minimum clearance thresholds for doors? If yes, specify.

SECTION 6 - CLEAN-UP AND DISPOSAL PROCEDURES

On a separate sheet of paper, answer the following.

6.a Describe procedures to be followed after application to clean up tools and equipment as well as to dispose of material.

SECTION 7 - POST APPLICATION MONITORING AND MAINTENANCE PROCEDURES

On a separate sheet of paper, answer the following in clearly marked sections.

7.a Describe recommended inspection procedures on the encapsulated surfaces following application to ensure the integrity of the coating.

7.b Describe training and skill level needed to conduct post application inspections. Attach any written instructions.

7.c Describe maintenance procedures to be performed to maintain the integrity of the encapsulated surface.

7.d Describe steps to be taken and maintenance to be performed on the encapsulated surface in the event of encapsulant breakdown.

7.e Describe training and skill level needed to conduct post application maintenance. Attach any written instructions.

7.f Describe activities that **must not** be performed on encapsulated surfaces following application. How long must restrictions remain in force?

SECTION 8 - PRODUCT WARRANTY

On a separate sheet of paper, answer the following in clearly marked sections.

8.a Describe product warranty. Include the length of time the product is warranted and special conditions that would void the warranty. Indicate the actions a purchaser or user must take in the event of a problem with a product.

8.b Provide the Customer Service telephone number to be used for assistance with any problem(s) related to this product. Describe the actions the company will take in the event of a complaint.

SECTION 9 - APPROVAL/ACTION BY OTHER AGENCIES

On a separate sheet of paper, answer the following.

9.a List all Federal, State or Local Agencies where approval or registration is, or has ever been, granted for this product. Has this product ever been subject to any disapproval, deregistration or delisting by any other Federal, State or Local Agency. ***IF YES, describe all actions taken, full details of each action, and final resolution.***

YES ☐ NO ☐

SUBMITTED BY: _____

Signature Title Date

STATE OF CONNECTICUT
Department of Public Health
Lead, Radon and Healthy Homes Program
410 Capitol Ave, MS#12LED, P.O. Box 340308
Hartford, CT 06134-0308
(860) 509-7299

1.0 Background:

This Toxicology Assessment Protocol is designed to provide the Connecticut Department of Public Health (DPH) with sufficient information to judge the potential risks associated with the use of an encapsulant product. This protocol is revised from the previous protocol because it was unnecessarily complex for many products. The revised protocol focuses upon obtaining basic toxicology and chemistry information for each ingredient so that the potential risks associated with product use can be fully evaluated. This Toxicology Assessment Protocol should be carried out by a Ph.D. level toxicologist with the capability to access the databases described below.

2.0 Purpose:

This evaluation procedure will assess the health risks to humans who may be exposed to encapsulant products associated with lead paint abatement activities. Whenever appropriate, in addition to workers and property owners who may be directly involved with these abatement procedures, potential receptors who may come into contact with any residues resulting from these activities (e.g. pregnant women, infants, small children, older inhabitants of dwelling where abatement procedures are performed) will also be considered.

3.0 Required Documentation:

The Toxicology Assessment Protocol requires submission of the following information:

- MSDSs for the encapsulant and all component ingredients of the encapsulant;
- Product specification, handling and use information, the product label, and all warnings, precautionary statements, recommendations for protective clothing/safety equipment, and disposal recommendations for excess product.
- An ingredient-by-ingredient review of each constituent MSDS in the formulation, providing **for each ingredient** the following information:

  a). Chemical Abstract Registry Number (CARN), chemical name/synonyms and percent weight in the formulation: Consideration of trade secrets or proprietary formulations will be made as provided under the OSHA Hazard Communication Standard. For percent weight, a range or maximum can be presented in accordance to OSHA requirement (29 CFR 1910-1200).

  b). Toxicology Information - **summarize** the available data on acute toxicity, irritation and sensitization potential, chronic toxicity, carcinogenicity, mutagenicity, reproductive and developmental toxicity, clinical (human/occupational exposure) toxicity; provide quantitative indicators of toxicity (e.g., LC_{50} / $LD_{50's}$; cancer slope factors and RfC/RfDs from EPA) where available; ingredients are to be researched through use of U.S. EPA databases [Integrated Risk Information System (IRIS); Health Effects Summary Tables (HEAST)], searches of the toxicology/biomedical literature, checks against IARC (International Agency for Research on Cancer), U.S. EPA, OSHA, and NTP (National Toxicology Program) lists of carcinogens, and use of on-line databases such as RTECS (Registry of Toxic Effects of Chemical

Substances), Chemline, HSDB (Hazardous Substances Databank), and Toxline/Medline; data should also be sought from the ingredient supplier as needed to complete the profile.

Note #1: Exceptions to this level of evaluation can be made for certain inert ingredients if it can be shown that they are generally considered non-toxic and non-volatile; such exclusions need to be fully justified (e.g., the ingredient is also commonly used in pharmaceuticals or foods);

Note #2: Where data are lacking (e.g., if no cancer or reproductive studies are available), the data gaps should be clearly identified.

c). Volatility - provide information on the ingredient's volatility including data on its vapor pressure; where this has not been measured, discuss the potential for volatilization based upon chemical structure, volatility of similar chemicals in the same structural class, water solubility (if encapsulant is water- based), etc.

d). Odor - for volatile ingredients, present the odor threshold and type of odor the ingredient produces.

e). Other Uses in Consumer Products - discuss whether the ingredient is commonly found in other consumer products such as paints, sealants, adhesives, etc.

f). References - all data provided for encapsulant ingredients are to be referenced to show literature source or database used to obtain the information;

4.0 Evaluation Procedure:

4.1 Qualitative assessment of exposure - discuss the potential for applicator or resident exposure to **each of the ingredients** describing the likely dose route(s);

4.2 Qualitative assessment of health risks - discuss the potential health implications of **each ingredient** based upon the toxicity information gathered, the percentage of the ingredient in the total formulation, and the potential for dermal, oral, and inhalation exposure; consideration should be given to the potential for ingredients to act in an additive or synergistic fashion; specifically address whether pregnant women, young children, asthmatics or other groups may be at higher risk; consider the degree of risk workers may obtain from repeated, chronic exposure to the proposed encapsulant;

4.3 The potential for other hazardous materials to be formed and released during application or curing (e.g., formaldehyde, resin monomers); if these processes are pH or temperature dependent, chemistry data describing the rate of formation at various pHs/temperatures are needed together with the pH of the encapsulant; the CARN, and toxicology and volatility information for any chemicals formed during use should be provided as described above;

4.4 Overall assessment of product risk stating whether it can be safely used by homeowners or only by qualified contractors, whether residents can occupy the indoor space during encapsulation and curing; if not, then determine when the area can be re-occupied; these statements must be based upon the ingredient-specific information described above and not upon vague, general statements that might be applicable to any product.

After an initial review of the submitted information, the Connecticut Department of Public Health has the option to request additional information (e.g., actual exposure measurements; quantitative risk assessment) to complete the safety review of the encapsulant.

Required Information - Encapsulant Labels

Described below are issues that must be addressed on the product labels for CT authorized lead encapsulants. The organization of the product label is important and can facilitate consumer readability and compliance. The sequential order that is described in these guidelines should be followed on the label to the extent possible. Please note that this list may not include all items that will have to be addressed for specific products. All statements on product labels must be consistent with data that has been submitted to the department and with the CT Fact Sheet for the product.

- Description of product

- What surfaces are eligible to be considered for application of this product during lead abatement projects in the state of Connecticut?
  - Interior, exterior or both. Specify directly on label.
  - Specify that the CT FACT SHEET is available from your company or the state and local health departments and that the FACT SHEET provides additional information regarding recommended uses and additional details.
  - List the surfaces on which the product can **not** be applied in a prominent location on the label.

- Pre-Work Preparation
  - State that consumer should consult state and federal regulations for worksite and personnel protection.
  - State that testing may be required to determine whether eligible surfaces may be encapsulated.

- Precautionary Measures/Protective Equipment
  - Specify the type of ventilation that is required such as mechanical ventilation and the overall need to apply the product in a well ventilated area.

    List the following:
    - **Avoid contact with eyes and skin by wearing safety glasses, gloves and protective clothing. (Must be bolded)**
    - **Special precautions during spray application; e.g., avoid breathing dust/mist - use proper respiratory protection. (Approved or equivalent MSHA/NIOSH respiratory protection) (Must be bolded)**
    - **Wash hands and face before eating, drinking, etc. (Must be bolded)**

- First Aid
  - Detail how to react to the effects of overexposure (inhalation, ingestion, dermal).

- List HMIS hazard rating

- List chemical ingredients/CAS No.

- Surface Preparation
  - Explain cleaning, de-glossing, mold/mildew removal, surface repair, and surface priming procedures.
  - **State that dry sanding, scraping, or other procedures that will generate and distribute large quantities of dust are prohibited. (Must be bolded)**
  - **State the proper methods to clean up dust such as HEPA vacuuming and wet cleaning methods. (Must be bolded)**
  - **Specify necessary containment of the work area and worker protection. (Must be bolded)**

- Specify instructions for mixing the product.

- Application
  - Specify how the product may be applied. (Airless-spray, brush, roller, etc.)
  - Detail the coating procedure.
  - Specify the appropriate thickness and how to measure.
  - List the environmental conditions that will affect the encapsulant.

- Occupancy During Application
  - Specify for different application methods. (Airless-spray, brush, roller, etc.)
  - Specify whether residents are free to enter the work area, whether they must remain out of the room/immediate vicinity of application, or whether they must not be in the building at all.

- Occupancy After Application
  - Specify, for each application method, how long residents must remain out of the room/work area after completion of work.

- Specify drying times for:
  - Dry to touch.
  - Prior to recoating.

- Clean up after application of encapsulant
  - Detail proper methods to clean up tools, drippings, and work area.
  - Specify cleaning products that should be used.
  - Specify how to dispose of waste.

- Maintenance after Application
  - Specify what should be done to avoid damage of encapsulated surfaces and how to repair damaged surfaces when necessary.

- Specify storage requirements for the encapsulant.

- Warranty