

**FORA - LBP ENCAPSULATION REPORT**

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## INTRODUCTION

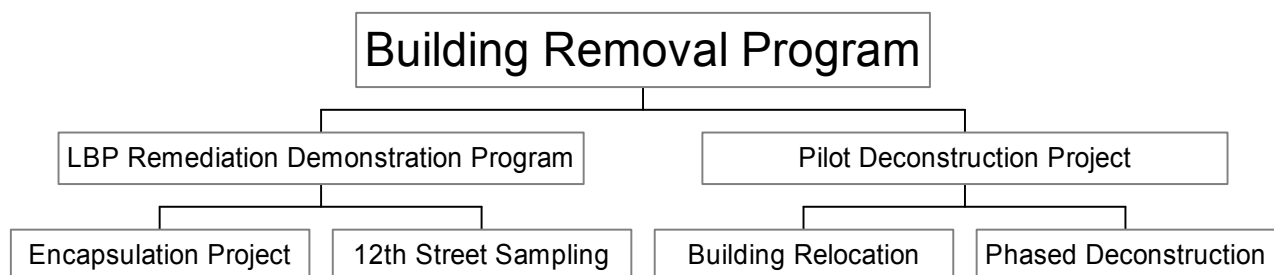
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### ***LBP Remediation Demonstration Program***

Fort Ord, located along Highway 1 five miles north of Monterey, was once home to 15,000 soldiers and 7,500 civilian workers. Founded as a cavalry post in 1917, it became a major training post during W.W. II. Most recently, Fort Ord was home to the 7th Infantry Division, which was inactivated in 1993. A hospital, barracks, single family homes, officers' quarters, auto pools, garages, staging areas, day rooms, and offices have occupied more than 7,000 acres of Fort Ord. These buildings have survived many years of constant use and re-modeling, but most of these buildings still have the original paint from the W.W. II years. This paint, along with other building materials, has been proven to be hazardous to public health. The dangers of lead-based paint (LBP) and asbestos are well documented, as it was widely used in civilian areas as well. There is no argument over the need for the careful handling of LBP contaminated building materials.

In January 2001, the Fort Ord Reuse Authority ("FORA"), under the Building Removal Program, initiated the Lead-Based Paint Remediation Demonstration Program in order to determine the extent of LBP contamination in buildings and soil, test possible solutions, and report on these findings. In addition, in February of 2000 the Fort Ord Inter-Agency LBP Working Group was created in order to help establish guidelines on how to best deal with the contaminated buildings on Fort Ord. W.W. II wood structures in Marina and the concrete block structures in Seaside were tested and profiled using the protocol developed by the LBP Working Group.

The following chart illustrates the elements of the Building Removal Program on the former Fort Ord.



The LBP Remediation Demonstration Program not only addressed LBP concerns during removal but also included attempts to address LBP concerns for buildings that would remain and be re-occupied. Thus, the LBP Encapsulation Project included buildings along the 12<sup>th</sup> Street Corridor as the test sites for LBP encapsulation products. These were nine buildings currently in use which could have posed a possible health threat for the office workers and other occupants. These buildings included a large meeting room, two story barracks, former mess halls, and day rooms, with an additional large sports complex/roller skating rink.

### ***LBP Issues (Health and Public Safety Hazard)***

Lead is a heavy metal capable of causing harmful effects, particularly in children, when present at certain levels. These effects can include damage to the nervous system, reproductive system, kidneys and bones. Lead exposure is reported as a blood lead level (BLL). The term "lead poisoning" refers to BLLs in excess of 50 micrograms per deciliter. The Center for Disease Control and Prevention has established 10 micrograms per deciliter as a point at which BLLs are considered elevated, but not dangerously high. Negative effects of lead exposure have not been convincingly shown to occur below a BLL in the range of 20 micrograms per deciliter.

Lead poisoning is a devastating yet preventable disease that is most damaging to children, fetuses, and women of childbearing age, and is often referred to as the "silent disease" because its effects typically occur gradually and without detection. Low blood-lead levels have been associated with learning disabilities, growth impairment, permanent hearing loss, visual impairment, and other damage to the brain and nervous system. At higher levels, lead exposure can cause severe brain damage, convulsions, and death. Additionally, lead exposure during pregnancy can alter fetal development and cause miscarriages.

The most common route of exposure to lead is through ingesting lead-based paint, although ingesting or inhaling lead-contaminated soil and dust are other possible sources of exposure. In 1978, the manufacturing of paint containing more than .06 percent lead by weight, or 6 parts per 10,000, was banned. LBP contains lead and lead oxides and when flaking off a surface can pose a threat to human health. FORA is concerned with the proper handling of this LBP during reuse, remodeling, and removal activities and is pro-active in its efforts to control LBP contamination. This report, under the auspices of the Building Removal Program and the LBP Remediation Demonstration Program, outlines the separate components of the Encapsulation Project and offers conclusions and recommendations regarding encapsulation as a contamination remediation strategy.

## ENCAPSULATION

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### *Why Encapsulate?*

There are more than 1800 buildings contaminated with LBP on the former base. The degradation of the LBP has created a potential risk of lead exposure. Since not all the buildings within the 12<sup>th</sup> Street project area were to be removed, a threat remained of exposure to workers in and around these buildings. In order to ensure public and worker safety, encapsulating LBP covered buildings was chosen for the abatement process.

During the summer, beginning June 1st, 2001, nine buildings on the former Fort Ord were encapsulated with three different types of materials. There were four basic objectives for the LBP Encapsulation portion of the LBP Demonstration Project. These included:

1. Public Awareness About Lead Hazards
2. Improve Public Safety
3. Make Buildings Safe For Reuse
4. Field Test Encapsulation Products
5. Application Process Review
6. Cost Analysis

### *Encapsulation Process/Method*

Typically, when repainting a building, a painting contractor starts by scraping off the loose and flaking paint, so that the new paint will bind directly to the exterior of the building. The scraping and painting process differs from the encapsulation process in that it seeks to re-adhere the existing paint and prevent generating hazardous LBP chips that require special disposal procedures.

**Building 2233: Scraped and Painted**



**Bldg 2925: Encapsulated**



These photos of Buildings 2233 and 2925 above compare methodologies. Building 2233 was scraped and painted by licensed contractors for approximately \$12,000. This building is similar in size to Building 2925 which was encapsulated during the LBP

Encapsulation Project for a total cost of \$8,540. The difference in cost between scraping/painting and encapsulation is predominantly due to the cost of the scraping by certified hazmat specialists and the disposal of the hazardous LBP chips.

Encapsulation systems typically consist of two parts, a base coat and a top coat. The base coat works as a surface preparation, surface stabilizer, and primer coat that re-adheres the LBP to the substrate. The top coat contains the finish pigment and protects the base coat from weather and abrasion.

### Encapsulation Process:

#### Base Coat



#### Top Coat



Surface preparation for LBP encapsulation is minimal and is very different from painting. Surface preparation for thin lightly-flaking LBP typically consists of applying the base coat directly to the surface, this locks in any dust that may contain lead. In some cases, such as in areas with trees, preparation may also include washing off heavy accumulations of foreign matter from horizontal surfaces, taking extreme care not to create any LBP debris.

The base coat is typically applied with a sprayer but can be applied with a brush or roller. A misting coat of base coat is applied to the surface to confine dust and soften the existing paint chips. Second, the base coat is "back rolled" with a paint roller to force the paint chips back on to the substrate with the encapsulant working as an adhesive. The encapsulant continues to penetrate the existing LBP and re-adhere the paint to the substrate. Care should be used around windows and doors to prevent gluing them shut with the encapsulant products.

The top coat is applied over the base coat after the base coat surface has taken on its final rubbery texture. The top coat is applied by spraying, rolling or with a brush. The finished application of base coat and top coat takes a few weeks to cure. Until curing has been achieved the encapsulant can be easily damaged by abrasion.

**Skirt Boards  
Before Encapsulation**



**After Encapsulation**



**Window Trim  
Before Encapsulation**



**After Encapsulation**



**Large Paint Chips  
Before Encapsulation**



**After Encapsulation**





## **PRODUCT TESTING/DEMONSTRATION**

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The three products that were chosen by the painting contractors were Safe Encasement, Global Encasement, and Pre-Tox. The following are brief descriptions of each product.

### ***Safe Encasement***

**7860 Dana Point Court, Suite R ■ Las Vegas, NV 89117-1927**

**Phone: (888) 277-8834 ■ Fax: (888) 277-8835**

**[www.safeencasement.com](http://www.safeencasement.com)**

### **Using the Safe Encasement products in the LBP Encapsulation Project**

The Safe Encasement products were applied to six buildings during the program. These Buildings were: 2231, 2880, 2861, 2881, 2900, and 2901. The existing LBP varied in condition from slightly flaky to very large paint chips. Photographs of various buildings before and after encapsulation are provided below.

#### **Building 2231: Before Encapsulation**



#### **After Encapsulation**



#### **Building 2881: Before Encapsulation**



#### **After Encapsulation**



## **Global Encasement**

**PO Box 2704 ■ San Anselmo, CA 94960**  
**Phone: (425) 457-1660 ■ Fax: (415) 457-1684**  
[www.encasement.com](http://www.encasement.com)

### **Using the Global Encasement products in the LBP Encapsulation Project**

The Global Encasement products were applied to one building interior. This building is currently used as a roller hockey arena. The existing LBP varied in condition from slightly flaky to very large paint chips. Photographs of the building before and during encapsulation are provided below.

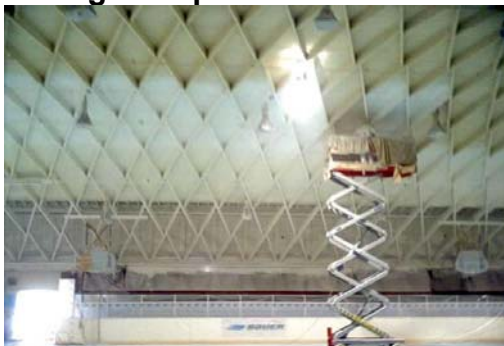
#### **Building 2248: Global Encasement Before Encapsulation**



#### **Paint Flakes on Rafters**



#### **During Encapsulation**



#### **During Encapsulation**





## **NexTec**

**4050 Westmark Dr. PO Box 2704 ■ Dubuque, IA 52002**

**Phone: (800) 338-8296**

**[www.PreTox.com](http://www.PreTox.com)**

### **Using the NexTec products in the LBP Encapsulation Project**

The NexTec product, Pre-Tox, was applied to two buildings during the program. These Buildings were: 2286 and 2925. The existing LBP varied in condition from slightly flaky to very large paint chips. Photographs of each building before and after encapsulation are provided below.

**Building 2925:  
Before Encapsulation**



**Building 2925:  
After Encapsulation**



## **BUILDING 2286 ENCAPSULATION CHALLENGES**

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Building 2286 posed some difficulties during the encapsulation process. The exterior was extremely weathered with huge flaking paint chips.

**Fine Paint Chips**



**Large Paint Chips**



Pre-Tox advised the contractor and FORA staff that the paint on building 2286 may be too badly deteriorated to effectively re-adhere by simply applying the base coat and back rolling normally, scraping may be necessary. FORA staff decided to attempt to use the typical application procedure to determine what conditions could be encapsulated without scraping.

**Building 2286: Before Encapsulation**



### Building 2286: After First Attempt at Encapsulation

West Wall



West Wall



Detail: Large Paint Chips



The first attempt at encapsulating Building 2286 without first scraping produced some interesting results. It was found that large thick paint chips would not re-adhere do to their thickness. In addition, the size of the chips prevented the base coat from being pushed behind the chip during back rolling. Although the chips were encapsulated the finished look of this first application was not considered satisfactory.

To remedy the problems that had developed by encapsulating the sizeable chips on building 2286, the encapsulated building was scraped to remove the large encapsulated chips that had not re-adhered. A second application of base coat and top coat were applied to the building surface. This second application was successful in producing a satisfactory finished look to the building surface.

### Building 2286: After Second Attempt at Encapsulation

West Wall



Detail of West Wall



## ENCAPSULATION COST ANALYSIS

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It is important to consider that Encapsulation systems have a 20 year design life and exceed the design lives of many paint products. This eliminates a considerable portion of future building maintenance costs when comparing encapsulation to scraping and painting.

Encapsulation costs for the various products are summarized below. The costs are shown as anticipated and actual. The differences is due to the products not covering as many square feet of surface area as estimated for average weathered surfaces. The project management anticipated that surfaces were weathered more than might be expected in a typical painting project so funds were set aside from the beginning to cover the cost for additional materials.

It should be noted that the Global product was applied to an interior surface and in only one building, so set-up and take-down costs were different than for the other portions of the project. Also, this one building was large enough to allow the use of motorized man-lifts which may have reduced the man-hours needed to cover the surface.

### Safe Encasement Encapsulation System:

Number of buildings	Total Surface Area (Exterior)	Anticipated cost for Encapsulation (materials and labor)	Anticipated price per Square Foot	Actual cost for Encapsulation (materials and labor)	Actual Cost per Square Foot
6	17,172	\$ 26,138	\$1.52	\$30,207	\$1.76

### Global Encasement Encapsulation System:

Number of buildings	Total Surface Area (Interior)	Anticipated cost for Encapsulation (materials and labor)	Anticipated price per Square Foot	Actual cost for Encapsulation (materials and labor)	Actual Cost per Square Foot
1	40,000	\$36,400	\$.91	\$30,251	\$.99

### NexTec Encapsulation System:

Number of buildings	Total Surface Area (Exterior)	Anticipated cost for Encapsulation (materials and labor)	Anticipated price per Square Foot	Actual cost for Encapsulation (materials and labor)	Actual Cost per Square Foot
2	14,222	\$ 23,610	\$1.66	\$29,042	\$2.04

## **GENERAL FINDINGS AND CONCLUSIONS: LESSONS LEARNED**

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- Different Encapsulation products require different application procedures.
- It takes time for a painter to learn how to apply an encapsulant system.
- Painters must realize there is a fundamental difference between encapsulating and painting. Whereas, painting requires preparation that removes the paint chips to prepare the substrate before priming, encapsulating uses the base coat to prepare the surface by re-adhering the chips to the substrate. The main goal of painting is to provide a long lasting protective coating on a structure, and encapsulation's main goal is to provide a long lasting coating to prevent the release of lead via chips into the environment.
- The strength of a paint job is in the preparation of the substrate; the strength of an encapsulation job is in the proper application of the base coat.
- Each building should have a test site of approximately 100 sq. ft. that is reviewed and approved before full scale encapsulation begins.
- Review of the test site should include: 1) application procedure, 2) amount of coverage needed, 3) effectiveness of product, 4) product limitations, 5) techniques to overcome product limitations, and 6) what to expect as a finished look.
- The first coat of encapsulant, "prime coat", is the one that softens and adheres the LBP paint chips. It is important that the prime coat be back rolled very soon after applied while it is liquid so that it saturates the chips.
- Thicker chips will not soften as easily as thinner chips, therefore thicker chips take more prime coat, more effort and more time to make them adhere than thin ones. Some chips may be too thick for the encapsulant to adhere with back rolling.
- It is important to manage the spray angle during application to ensure that the right surfaces are coated with the base coat to get maximum adhesion.
- When estimating material needs and applying primer coat, erring on the high side with primer coat will help to keep things adhering and also help the top coat go farther.
- Encapsulating is cheaper than scraping and painting, especially if the encapsulant performs to its 20-year design life.



## **APPENDIX A: SAFE ENCASUREMENT PRODUCT DESCRIPTION**

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### ***Safe Encasement***

**7860 Dana Point Court, Suite R ■ Las Vegas, NV 89117-1927**

**Phone: (888) 277-8834 ■ Fax: (888) 277-8835**

**[www.safeencasement.com](http://www.safeencasement.com)**

### **Product Description: SE-110 Penetrating-Stabilizer**

SE-110 is a water-based, clear, non-toxic primer that penetrates, stabilizes and seals friable damaged paint and fiber containing insulation materials. Properly applied, SE-110 can be installed without disturbing hazardous dusts or fibers. SE-110 has tenacious adhesion qualities and shrinks as it dries to form a clear, tacky, protective membrane that has superior low temperature flexibility and an elongation of 4000% at 70°F. SE-110 is an excellent primer to stabilize damaged interior or exterior painted surfaces including walls and eaves, ceilings, old or new wood, window sills, duct and pipe insulation, over fiber reinforced plaster, fireproofing insulation on steel or concrete, Transite, and fiber glass duct insulation surfaces. SE-110 is ready to use and should not be diluted with water before application. A "Test Patch" and an "X-Cut Tape Test" are required in the States of MA and CT, and are recommended elsewhere. SE-110 Penetrating-Stabilizer is to be over-coated with SE-120 Protective-Skin to form a SAFE Encasement System that can be warranted for 5 to 20 years (see Limited Warranty for details).

#### **Benefits:**

- Safeguarding People while Saving Money
- Minimal Surface Preparation.
- Safely Stabilizes Aging Paint and Friable Surfaces.
- Reduces or Eliminates Disturbing Hazardous Materials and Minimizes Waste Disposal.
- Safe & Easy to Use, Non-toxic, Cleanup with Water & Soap.
- Lowers Job-site Liabilities.
- Seals, Stabilizes & Protects Building Surfaces as it Adds Sound & Insulation Qualities

#### **Approvals:**

- ASTM E1795-97, Non-toxic, passed all tests when used with SE-120 Protective-Skin (interior and exterior approvals).
- MA DPH Approved (DL-12571).
- Approved in the States of NY, MA, MN, CO, OH and CT.
- Listed by CA Fire Marshals Off.

**Technical Data:**

- ASTM E84-99, Surface Burning Characteristics, Class I, Flame Spread Index = 10, Smoke Developed Index = 15, (this is equal to NFPA 255, ANSI/UL #723, and UBC 8-1).
- ASTM E119-98, 3-hour Fire Test (no negative effect on fireproofing performance).
- ASTM E1494-92, 2-hour Fire Test of encased fireproofing on a steel deck (no negative effect on fireproofing performance).
- Passed University of Pittsburgh Combustion Toxicological Testing Protocol (no acute lethality of thermal decomposition products).
- ASTM E162-98, Surface Flammability with a Radiant Energy Source, (FS x Q = IS).
- ASTM E736-93, Passed Cohesion/Adhesion Testing. • ASTM D-3960, Zero VOC's.
- ASTM D-1653, (0.6 perms).
- Solids by volume 45% (+/-5%).
- Weight = 8.7 lb. per gallon.
- Liquid appearance - milky white.
- Dried appearance – clear.
- Re-coat time – 2 to 24 hours.

**Installation:** Apply with air-less sprayer, brush or roller. Apply at temperatures at or above 50°F. Apply only to surfaces with moisture content of 5% or less (use moisture meter). Coverage rates can be determined through a “Test- Patch” and refer to specific Instruction Guidelines for help estimating coverage rates on various types of substrates. For painted surfaces a coverage rate of 100-150 sq. ft. per gallon (10-16 wet mils) is recommended. For stabilizing fiber-containing insulation, a coverage rate of 40-120 sq. ft. per gallon is recommended.

**Maintenance:** Periodic inspections of Encasement Systems help ensure extended performance and reduced costs.

**Product Description: SE-120 Protective-Skin**

SE-120 is a water-based, non-toxic, high-solids, 100% acrylic coating that is rust-mildew- and fire-resistant. Suitable for application over friable damaged paint and fiber containing insulation, it bonds with SE-110 Penetrating-Stabilizer (primer) to form a tough, seamless flexible protective barrier. SE-120 is excellent for use over interior or exterior surfaces and is suitable for application over walls and eaves, metal or Transite siding, textured ceilings, old wood, windowsills, fiber glass duct and pipe insulation, fiber-reinforced plaster, fireproofing insulation on structural steel or concrete. SE-120 is ready to use and should not be diluted with water before application. A “Test Patch” and a “X-Cut Tape Test” are required in the States of MA and CT, and is recommended elsewhere. Consult with the SES Sales Representative for limitations on treatment of friction surfaces. SE-120 Protective-Skin applied over dry SE-110 Penetrating-Stabilizer, safely stabilizes, seals and encases the surface with a tough, flexible protective covering that is impact- abuse- and household chemical- resistant. SAFE Encasement Systems can be warranted for up to 20 years (see Limited Warranty for details).

**Benefits:**

- Safeguarding People while Saving Money SM.
- Over-Coats & Protects Surfaces that Contain Lead or Asbestos.
- Reduces or Eliminates the Disturbance of Hazardous Materials.
- Minimizes Waste Disposal.
- Safe & Easy to Use, Non-toxic, Clean up with Water & Soap.
- Lowers Job-site Liabilities.
- Encasement Seals & Stabilizes Hazardous Risk Building Surfaces.
- An Affordable Solution that Prolongs the Life of a Building

**Approvals:**

- ASTM E-1795-97, Non-toxic, passed all tests when used with SE-110 Penetrating-Stabilizer (interior & exterior approvals).
- MA DPH Approved (DL-12571).
- Approved in the States of NY, MA, MN, CO, OH & CT.
- Listed by CA Fire Marshals Off.

**Technical Data:**

- ASTM E84-99, Surface Burning Characteristics, Class I, Flame Spread Index = 10, Smoke Developed Index = 15, (this is equal to NFPA 255, ANSI/UL #723, and UBC 8-1).
- ASTM E119-98, 3-hour Fire Test (no negative effect on fireproofing performance).
- ASTM E1494-92, 2-hour Fire Test of encased fireproofing on a steel deck (no negative effect on fireproofing performance).
- Passed University of Pittsburgh Combustion Toxicological Testing Protocol (no acute lethality of thermal decomposition products).
- ASTM E162-98, Surface Flammability with a Radiant Energy Source, (FS x Q = IS).
- ASTM E736-93, Passed Cohesion/Adhesion Testing.
- ASTM D-3960, Zero VOC's.
- ASTM D-1653, (0.6 perms).
- Solids by volume 60% (+/-2%).
- Weight = 11.5 lb. per gallon.
- Viscosity = 115 to 130 KU.
- Re-coat time = 2 to 8 hours.
- Liquid color – white or tinted (custom colors available).

**Installation:** May be applied by air-less sprayer, brush or roller. Apply at temperatures at or above 50°F. Coverage rates can be determined through a "Test- Patch" or refer to specific Guide Instructions for help estimating coverage rates on various types of surfaces. For painted surfaces a coverage rate of 100-150 sq. ft. per gallon (10-16 wet mils) is recommended for initial tests and estimation of coverage. For encasement of fiber containing fireproofing and insulation, a coverage rate of 40-150 sq. ft. per gallon is recommended.

**Maintenance:** Periodic inspections of Encasement Systems help ensure extended performance and reduced costs.

## **APPENDIX B: GLOBAL ENCASEMENT PRODUCT DESCRIPTION**

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### ***Global Encasement***

**PO Box 2704 ■ San Anselmo, CA 94960**  
**Phone: (425) 457-1660 ■ Fax: (415) 457-1684**  
[www.encasement.com](http://www.encasement.com)

### **Product Description: PSN-10**

PSN-10 is a proprietary elastomeric matrix that is water-based, non-toxic, flexible, clear Primer-Sealer- Neutralizer that safely seals Lead-Based Paint (LBP) to surfaces which are to receive a GLOBAL Encasement coating. It functions as a primer, a sealer, and a stabilizer for surfaces that can be only marginally cleaned and where tenacious adhesion is needed.

PSN-10 is excellent for use indoors or outdoors and is suitable for application over bare or painted wood, walls, ceilings, ducts or pipes, and surfaces that are difficult to adhere to, such as cracked and painted plaster, concrete, masonry and various fibrous materials.

**Product Application:** PSN-10 is ready to use and should never be diluted with water before application. Surfaces to be sealed must be as clean as possible, dry, and free of other contaminants which would interfere with proper adhesion.

PSN-10 should be applied and allowed to dry thoroughly, normally 1/2 to 1 hour, before applying top coats. In no case should top coatings be applied until PSN-10 is completely dried.

PSN-10 should not be applied at temperatures below 50°F or when relative humidity is 90% or more. Do not apply PSN-10 if weather conditions will not permit drying before precipitation or freezing temperatures. Cool temperatures and high humidity retard drying.

### **Technical Data:**

- Solids by volume 45% (+/-5%)
- Weight per gallon 8.7 lbs.
- Liquid appearance milky white
- Dried appearance clear
- Drying time 1/2 to 1 hour (depends on temperature and humidity)

**Properties:** PSN-10 has an elongation of 4000% at 70°F and has superior low temperature flexibility. This material has passed ASTM E-119 testing over fireproofing insulation, ASTM E-84 and E-162. This material is non-toxic and non-mercuric, with zero V.O.C.'s. Cleanup is with water. PSN-10 can be used with various scrim reinforcement for repairs.

**Coverage:** PSN-10 may be brushed, rolled or sprayed and coverage varies depending on porosity, mil thickness, and texture of the surface being encased. Calculated coverage rates on a flat surface are as follows:

Dry Mils

= 6 @ 120 sq. ft./gallon.	= 10 @ 72 sq. ft./gallon.
= 7 @ 103 sq. ft./gallon.	= 11 @ 65 sq. ft./gallon.
= 8 @ 90 sq. ft./gallon.	= 12 @ 60 sq. ft./gallon.
= 9 @ 80 sq. ft./gallon.	

**Product Description: GE-40**

GE- 40 is a high performance, water-based, 100% acrylic, non-toxic, rust, mildew, and fire resistant Encasement top coat that's applied over PSN-10 to form a GLOBAL Encasement System for Lead Base Paint (LBP). It functions as a tough, abuse resistant, fire resistant and chemical resistant protective jacket that encloses and abates the hazardous material exposure.

GE-40 is excellent for use indoors or outdoors and is suitable for application over walls, ceilings, ducts or pipes. It is designed to safely seal and encase hazardous risk materials on plaster, concrete, masonry and various fibrous materials.

**Product Application:** GE-40 is ready to use and should never be diluted with water before application. Surfaces to be coated must be sealed with PSN-10 and free of other contaminants which would interfere with proper adhesion.

GE-40 should be applied and allowed to dry thoroughly, normally 2 to 8 hours, before applying additional coats. In no case should coatings be applied until the PSN-10 is dried.

GE-40 should not be applied at temperatures below 50F or when relative humidity is 90% or more. Do not apply GE-40 if weather conditions will not permit drying before rain, dew or freezing temperatures. Cool temperatures and high humidity retard drying.

**Technical Data:**

- Solids by weight 69%(+/-2%)
- Solids by volume 60%(+/-2%)
- Weight per gallon 11.5 lbs.
- Viscosity 115 to 130 KU
- Recoat time 2 to 8 hours

**Properties:** GE-40 has an elongation of 300%-ASTM D412) a tensile strength of 200 psi (ASTM D412) it has superior flexibility (ASTM D522,A) with high impact resistance (ASTM D2794) and adhesion (ASTM E736). This material has passed ASTM E-1 08 (comparable to U. B.C. Std 32-7) and meets the requirements for Class A rating as tested in accordance with UL-790. GE- 40 has passed ASTM E-1 19 testing, ASTM fire



tests E-84 and E-162, and QUV G53. GE- 40 is nontoxic and non-mercuric with zero V.O.C.'s. This material is easy to clean, safe to use and solvent free. It can be used with various scrim reinforcements for repairs.

**Coverage:** GE-40 may be brushed, rolled or sprayed and coverage varies depending on porosity, mil thickness, and texture of the surface being encased. Calculated coverage rates on a flat surface are as follows:

Dry Mils

= 6 @ 160 sq. ft./gallon.

= 8 @ 120 sq. ft./gallon.

= 10 @ 96 sq. ft./gallon.

= 12 @ 80 sq. ft./gallon.

= 14 @ 68 sq. ft./gallon.

## **APPENDIX C: NEXTEC ENCASEMENT PRODUCT DESCRIPTION**

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### **NexTec**

**4050 Westmark Dr. PO Box 2704 ■ Dubuque, IA 52002**

**Phone: (800) 338-8296**

**[www.PreTox.com](http://www.PreTox.com)**

### **Product Description: Pre-Tox SprayWrap**

PreTox SprayWrap is a water based, clear, non-toxic adhesive coating used as a primer coat or as a dust and emissions barrier during the abatement and/or demolition of lead and/or asbestos covered structures. PreTox SprayWrap can be applied without disturbing or creating hazardous dust or fibers. SprayWrap has tenacious adhesion qualities and shrinks as it dries. It well suited for stabilizing and containing all types of substrates to prevent release of dust or fibers. When used for containment/encasement rather than demolition, PreTox SprayWrap should be over-coated with PreTox BearACote encasement system.

### **Recommended Uses:**

- Wooden Structures
- Masonry Structures
- Building Demolition
- Steel Structures
- Indoor Encasement
- Lead Based Paint
- Outdoor Encasement Asbestos

**Application Recommendations:** PreTox SprayWrap can be applied using brush, roller or airless sprayer application methods at temperatures above 50°F.

### **Features:**

- Zero VOC's
- 45% Solids by Volume (+/- 5%)
- @9 lbs. Per gallon
- Liquid Appearance – White
- Dry Appearance – Clear
- Coverage: 40 to 100 sq. ft.

### **Product Use:**

1. Prepare substrate by removing loose or flaking materials
2. Mix thoroughly
3. Apply at 12 to 14 wet mils
4. Allow to dry
5. Overcoat with PreTox BearACote

### **Product Description: BearACote**

PreTox BearACote is a water based, non-toxic high solids coating used as a barrier for the abatement of lead and/or asbestos covered structures. PreTox BearACote can be applied without disturbing or creating hazardous dust or fibers.

BearACote has tenacious adhesion qualities and shrinks as it dries. It well suited for stabilizing and containing all types of substrates to prevent release of dust or fibers. When used for containment/encasement, PreTox BearACote should be coated over the PreTox SprayWrap adhesive primer system.

**Recommended Uses:**

- Wooden Structures
- Masonry Structures
- Building Demolition
- Steel Structures
- Indoor Encasement
- Lead Based Paint
- Outdoor Encasement Asbestos

**Application Recommendations:** PreTox BearACote can be applied using brush, roller or airless sprayer application methods at temperatures above 50°F.

**Features:**

- Zero VOC's
- 60% Solids by Volume (+/- 5%)
- @11 lbs. Per gallon
- Liquid Appearance – White or Tinted
- Dry Appearance – Custom colors available
- Coverage: 40 to 100 sq. ft