

SAFE ENCASEMENT SYSTEMS

We manufacture specialty protective coatings that stabilize, seal & protect hazardous surfaces while abating the following environmental concerns:



Our Specialty Products Division Also Offers:

- Urethane coatings for tanks
- Epoxy coatings for floors & tanks
- Metalized protection systems
- Composite corrosion protection systems



Introduction to SAFE Encasement Systems

The smart, safe alternative for management of hazardous surfaces.™



SAFE Encasement Systems (SES) is a leading manufacturer of environmentally-safe protective coating systems that are specifically designed to help solve health and safety issues caused by mold, asbestos or fiberglass fibers or lead-containing materials. SES was founded by John W. Thoburn, P.E. in 1997. SES is committed to providing our clients with proven, state-of-the-art solutions for safe, effective, ethical and affordable abatement solutions for dealing with these matters in homes, schools, hospitals, historic buildings, government and military facilities, commercial and industrial sites throughout the USA, Canada, Europe and Australia.



In recent years, more and more people have come to realize that the quality of the air we all breathe can largely determine our personal health and well-being. There have been many examples of materials being used in the construction of pre-1978 homes and older buildings that over time have proven to be a threat to our personal health and safety, as well as to our collective environments. In determining options to solve these hazardous surface problems, the Federal Government published and applied Federal-Standards for effective abatement methods. The four approved abatement methods are: a) total removal and replacement, b) enclosure, c) encapsulation and d) encasement. *Of these four accepted abatement solutions; encasement is the choice that is less disruptive, meaning that the process of installing an encasement system to stabilize and seal-over these obsolete building surfaces, can safely be done without disturbing toxic dusts or fibers.*



SES provides exceptional solutions through our custom designed encasement protective-coating systems that help make an environment a safer and healthier place to live and/or work. Our environmentally safe encasement systems help to effectively resolve Indoor Air Quality (IAQ) concerns and health and safety issues, such as: mold and mildew, corrosion, fiber-release (fiber-glass or asbestos), lead-based paint and various other hazardous surfaces. SES solutions that pass ASTM 3273/3274 mold resistance testing without the inclusion of an EPA-registered pesticide, avoiding these attendant health, safety, licensing and notification issues.



From small beginnings, SES has grown to include distribution centers in many US States, Canada, EU and Australia. We can ship overseas from either the East or West Coast. Temperature-controlled shipping arrangements are available, allowing us to safely transport our water-based materials in virtually any weather, any time of the year. Our team of master and regional distributors, our qualified sales engineers and representatives are here to serve the client's needs by providing information and on-site visits, if needed.

John W. Thoburn, President of SAFE Encasement Systems, summarizes, *"Our goal is to help solve today's environmental concerns in the safest, most effective, ethical and affordable way possible, without creating any new environmental challenges."* By providing prompt and professional service, while providing encasement systems that meet or exceed the highest safety standards and contribute to the protection of people and the environment, SAFE Encasement Systems results are doing just that.



SE-Why & Where 11-2003

09990 FOR PAINT RESTORATION, MOLD REMEDICATION, ABATEMENT OF ACM & LBP (STOP AIRBORNE FIBERS) AND CORROSION CONTROL.

Abatement by Encasement: Safeguarding People while Saving Money ®

Why and Where Encasement?

When making a decision about specifying options for the abatement of Mold, Asbestos Containing Materials (ACM) or Lead-Based Paints (LBP), clients can choose from four EPA listed and accepted abatement methods, these are: (a) removal and replacement, (b) enclosure, (c) encapsulation, and (d) encasement.

Billions of dollars have been spent removing ACM and LBP from schools, homes and commercial buildings built prior to 1978. We've now learned that removal and replacement of these hazardous materials from a building requires extensive demolition, can trigger code upgrades and can require long-term relocation of occupants.

Recent US Government studies on asbestos removal actions conclude; occupant relocation expenses are often equal to the cost of abatement by removal and replacement.

Encasement became a U.S. EPA (Environmental Protection Agency) accepted abatement action in July 1990 when the EPA issued Publication no. 20T-2003, the "Management Planners Guideline for Managing Asbestos in Place". Encasement is described as; directly covering the ACM with a liquid applied, hard-setting sealing material that forms a monolithic, seamless jacket that totally encloses (encases) the ACM, leaving zero air-gap.

The goal of all Lead-Based Paint remediation work is to produce a LEAD-SAFE surface while not disturbing hazardous materials or dust. This is achieved through the two-step encasement process. First step is to stabilize the surfaces with SE-110 Penetrating-Stabilizer. When dry, this is followed by over-coating with SE-120 Protective-Skin. *These materials bond together forming a flexible, long-lasting composite protective jacket-like membrane or barrier.*

Where possible, non-disruptive "Management-In-Place" asbestos or lead abatement methods are recommended by the US EPA, OSHA and HUD. The hazardous risks associated with ACM and/or LBP can be safely and affordably abated through application of SAFE Encasement Systems. Limited Warranties are available for up to 20-Years.

Markets for Encasement:

Renovation, Restoration & Remodeling.
Demolition and Historical Preservation.
Hospitals, Industrial & Commercial.
Private and Public Schools, Colleges
or Universities.
Residential, Affordable & Public Housing.
Industrial & Food Processing.
Municipalities & Government Facilities.

Proven Areas for Encasement:

Asbestos Fireproofing on Steel or Concrete
(Management-In-Place Abatement).
Abatement of Lead-Based Paint Exposure Risks.
Mold and Mildew Remediation.
Air Quality Improvement (Cleaner, Safer Indoor
Air Quality in Plenums & Ducts).
Corrosion Control, Preventative Maintenance
Repairs on Boilers & Steam Pipe Insulation.
Telephone Control Rooms, Elevator Shafts,
Electrical Control Rooms & Computer Rooms.

Concerns Solved with Encasement:

Fiber Exposure Abatement with Encasement is a highly cost effective Abatement Option, initial savings of 40% to 80% Vs. Removal and Replacement, with Great Short & Long-Term Benefits for building owners.

SAFE Encasement Systems Comply with Uniform Building Codes, "Class A" Fire Rated and Passed ASTM E1795-97, E84, E162, E662, E1494 & E119. A Safer Abatement Method, when Properly Installed - Does Not Disturb Dust or Fibers as Encasement Systems Safely Stabilize, Seal and Enclose Asbestos and Lead Hazard Surfaces Found in pre-1978 Homes, Schools or Commercial Properties.

Mold and mildew resistance (passes ASTM D-3273/D-3274) without any EPA- Registered pesticides, thereby avoiding risks of possible allergic reactions to pesticide fumes that escape into the indoor environment and living spaces.

Applicators do not need to be certified/registered/ Licensed pesticide applicators. When used in Schools, parental notification is not required.

SAFE Encasement Systems are Tough, Long- Lasting and cure to form a Seamless, Waterproof Protective Enclosure (Jacket) that Remains Highly-Flexible and has Lt'd Warranty for up to 20-Years.

Encasement is Environmentally Sound as Minimal (if any) Hazardous Waste Materials are Generated. Encasement Materials are Water-Based, Non-toxic & Solvent-Free making them Safe to Store, Easy to Use and Cleanup is with Soap and Water.



www.safeencasement.com

Abatement by Encasement:
Safeguarding People
while Saving Money ©

**09990 FOR ASBESTOS AND LBP ABATEMENT,
MOLD REMEDIATION AND CORROSION SOLUTIONS,
STOPS AIRBORNE FIBERS (ASBESTOS OR FIBERGLASS).**

SES Product Listing 10-2004

Listed below are the products for abatement or remediation of Lead-Based Paint, Asbestos, Mold and other Hazardous Surfaces. SE-110 + SE-120 or SE-130 forms a flexible encasement system for safe abatement of these hazardous surfaces.

Products	Description
SE-110 Penetrating-Stabilizer (stabilizing-primer)	SE-110 Penetrating-Stabilizer – A water-based, non-toxic, dries-clear primer that penetrates stabilizes and seals damaged painted surfaces, friable fibrous insulation materials and treated mold surfaces. <i>Suitable where excellent adhesion is required on interior or exterior surfaces including walls, eaves, ceilings, old or new wood, window sills, air ducts, pipe insulation, asbestos fireproofing insulation, Transite, plaster and concrete surfaces.</i>
SE-120 Protective-Skin (flat finish)	SE-120 Protective-Skin - A water-based, nontoxic, high-solids, 100% acrylic coating that remains flexible, will not crack, chip or peel, mold-resistant and fire-resistant. <i>Suitable for application directly or over SE-110 or -CI primers on lead-paint, asbestos or treated mold surfaces.</i>
SE-130 Protective-Skin (satin finish) Self-Priming	SE-130 Protective-Skin - A satin finish, water-based, nontoxic, high-solids, 100% acrylic coating that remains flexible, will not crack, chip or peel, mold-resistant and fire-resistant. <i>Suitable for application directly (self-priming) or over SE-110 or -MS primers on lead-paint or treated mold surfaces.</i>
SE-160 Clear High-Gloss Topcoat	SE-160 – A clear, high-gloss, mold-resistant topcoat that is used to add dirt resistance to select surfaces (<i>interior or exterior surfaces</i>).
SE-170-MR High-Gloss Topcoat (with Mold-Resisting Additive)	SE-170-MR – A high-gloss topcoat, forms a highly durable, washable, highly dirt, weather and mold resistant surface, including for use on select interior or exterior surfaces and marine duty (<i>suitable for foot traffic with multiple coats</i>).
MR Additive Option	<i>Please note that products SE-110, SE-120 and SE-130 are also available with a halogen-free Mold-Resisting additive. Consult with SES Representative.</i>
SE-110-MS Multi-Surface Penetrating-Stabilizer (primer with Corrosion Inhibitors)	SE-110-MS Penetrating-Stabilizer with Corrosion Inhibitors - Clear, non-toxic primer that penetrates, stabilizes and seals damaged painted surfaces while stopping corrosion on most surfaces. <i>Suitable for application over Multiple-Surfaces, including rusted steel surfaces.</i>
SE-150 Architectural Sealant	SE-150 Architectural Sealant (100% Acrylic Caulk) - A fully compatible trowel grade caulk that is used to seal, fill and repair any surfaces that are to be encased (<i>3-1/2 gallon Tubs</i>).
SE-151 Acrylic Urethane Sealant	SE-151 Acrylic Urethane Architectural Sealant - A high performance urethane acrylic sealant. <i>Specifically formulated to provide the ultimate in adhesion and durability (10.3 Fl. Oz tubes - 12 per Case).</i>
SE-310 Satin-Finish Topcoat	SE-310 Satin Finish – A satin-finish topcoat that is used for added protection from airborne dirt on selected surfaces, suitable for interior or exterior service.
SE-Industrial Cleaner	SE-Industrial Cleaner is a concentrated, non-corrosive, water-soluble biodegradable cleaner that's used to wet-clean and prepare surfaces.
SE-C*R Soluble Salts Remover	SE-C*R Soluble Salts Remover is a water based additive for use in pressure washing or scrubbing of metal surfaces, efflorescing brick and mortar. <i>Greatly facilitates the removal of soluble surface salts such as chlorides, nitrates and sulfates from surfaces. Salt detection Test Kits available.</i>
SE-PF Polyester Reinforced Fabric	SE-PF Polyester Reinforced Fabric - A 100% polyester fabric with outstanding physical strength properties, quick wet-out and saturation characteristics, easy to apply (<i>4" or 20" wide x 320 foot long rolls</i>).
SECI -3000 High-Heat Resistance (3000° F)	SECI-3000 - A water based, safe to use Highly-Heat Resistant coating (3000°F), VOC = 0.00%, <i>no lead or chromates</i> , black or custom colors.
SECI -FE Flexible-Epoxy	SECI-FE – A 2-Component, Zero VOC's, Solvent-Free Flexible Epoxy in dark gray or custom colors - 3 gallon kits (2 + 1 gallon).

SAFE Encasement products are available in 3.5-gallon Tubs, 5-gallon Pails, 55-gallon Drums and 275-gallon Totes.

SAFE Encasement Systems ~ 7860 Dana Point Court ~ Las Vegas, NV 89117-1927
Phone: (888) 277-8834 ~ www.safeencasement.com ~ Fax: (888) 277-8835



FOR PAINT RESTORATION, ENCASEMENT OF ASBESTOS, LEAD-PAINT, MOLD & OTHER HAZARDOUS SURFACES

SE-Technical Specifications 01-2004

TECHNICAL SPECIFICATIONS

SAFE Encasement Systems that use SE-110 Penetrating Stabilizer (primer), over coated with SE-120 Protective Skin (top-coat) do fully comply with the following ASTM Test Standards and have earned the Federal, State, City and National approvals listed below:

TECHNICAL DATA

- ◆ **ASTM E-1795-97**, "Standard Specification for Non-Reinforced Liquid Coating Encapsulation Products for Leaded Paint in Buildings" – passed all tests when using 10 wet mils of SE-110 Penetrating-Stabilizer, over-coated with 10 wet mils of SE-120 Protective-Skin. *These non-toxic encapsulant materials are approval for use over both interior and exterior surfaces.*
- ◆ **ASTM E-84-99**, Surface Burning Characteristics, Class I, Flame Spread Index =10, Smoke Developed Index = 15, (this is equal to Class A in NFPA 255, ANSI/UL #723, AND UBC 8-1).
- ◆ **ASTM E-119-98**, Fire Test of encased fireproofing on steel columns, (3-hour test firing, this demonstrates no negative effect on the performance of encased fireproofing insulation).
- ◆ **ASTM E-1494-92**, Fire Test of encased fireproofing on a steel deck, (2-hour test firing, this demonstrates no negative effect on the performance of encased fireproofing insulation).
- ◆ **Passed UPITT (University of Pittsburgh) Combustion Toxicological Testing Protocol**, (no acute lethality of thermal decomposition products).
- ◆ **ASTM E-162-98**, Surface Flammability with Radiant Energy Source, (a DOT Standard)
($F_s \times Q = I_s$) $F_s = 1.29$ $Q = 1.77$, $I_s = 2.31$
- ◆ **ASTM E-736-93**, Passed Cohesion/Adhesion Pull-off Testing over Fire Proofing.
- ◆ **ASTM D-4541**, Pull-off Adhesion/Cohesion of SE-110/SE-120 System (exceeds 300 psi).
- ◆ ***ASTM D-3359**, Pull-off Adhesion (exceeds standards).
- ◆ ***ASTM D-4214**, Chalking (encasement system surfaces do not chalk or crack).
- ◆ ***ASTM D-4060**, Dry Abrasion Resistance (greatly exceeds test standards).
- ◆ ***ASTM D-522**, Flexibility (remains flexible - does not become brittle or crack over time).
- ◆ ***ASTM D-2794**, Impact Resistance (160+ inch-lbs. - exceeds testing standard).
- ◆ ***ASTM D-3273, D-3274**, Mold and Mildew Resistance (passed).
- ◆ ***ASTM D-3359**, Paint-ability (passed, can be over painted).
- ◆ ***ASTM D-2486**, Scrub Resistance (exceeded 1200+ cycles test limit).
- ◆ ***ASTM D-2370**, Tensile Properties of Encasement System (245 psi).
- ◆ ***ASTM D-3960**, Zero VOC's (below 25 ppm detection limit for specified test method).
- ◆ ***ASTM D-1653**, Permeability (0.6 perms), water vapor can pass through the multi-layered protective membrane formed through the encasement process ("lets the building breathe").
- ◆ ***ASTM D-1308**, Household Chemical & Water Resistance (exceeded the standards on all tests).
- ◆ ***ASTM G-53**, Weathering/Aging (1,000 hours) – no chalking, cracking or peeling.
- ◆ **ASTM B-117**, Salt Fog Chamber (no blistering or rusting after 1,500 hours of exposure).
- ◆ **ASTM D-4585**, Humidity Chamber (no blistering or rusting after 1,400 hours of exposure).
- ◆ **Weatherization, Federal Specification TT-C-555B**, Passed the Wind Driven Rain Tests.

APPROVALS, ACCEPTANCES and LISTINGS

Massachusetts Department of Public Health Approved (Report # DL-12571-A).
Approved in the States of MA, NY, MI, MN, CO, CA, OH and CT (interior & exterior protocol).
Approved by the City of Los Angeles, CA.
UL Listed Surface (file # R16588).
Listed with the CA Fire Marshall's Office.
Approved and Listed by the City of New York, MEA# 301-00-M.
Other approvals or acceptances include: DOE, US Army Corps of Engineers, NEHC and the US Department of Agriculture (US Forestry).

Note: *Denotes From ASTM E-1795-97 the National Standard for Encapsulation Products.

All of the above ASTM tests were performed by DL Labs (DLL is Accredited by the National Voluntary Laboratory Accreditation Program – Lab Code 1002523) and Southwest Research Institute (SwRI is a Nationally Recognized Testing Laboratory by National Evaluation Service, Inc., Report numbers NER-TL351 and NER-QA409).