Clandestine Meth Lab Remediation

Crystal Clean is a revolutionary decontaminant for safe and cost-effective meth lab clean-up.

- Neutralizes methamphetamine with just one application. <u>Proven</u> to reduce methampetamine to near undetectable levels with only a 60-minute contact time.
- Significantly reduces remediation costs. Use of Crystal Clean reduces the overall manpower, equipment and supplies necessary to meet state guidelines.
- EPA registered, inherently biodegradable, non-toxic, and environmentally safe. Has no hazardous by-products, and is safe to use.
- Easy to mix and apply.
- Easy clean-up.

Crystal Clean Product Development

In July 2000, Sandia National Laboratories provided non-exclusive, all field-ofuse licenses to EFT of Huntsville, AL for manufacture and sales of the Sandia National Laboratories' decontamination technology. EFT currently produces and sells the decontamination solution as EasyDECON[™]. EasyDECON[™] was developed through funding provided by the U.S. Department of Energy's and National Nuclear Security Administration's Chemical and Biological National Security Program (CBNP). EasyDECON has been deployed globally to military operation theaters. EasyDECON was the first decontaminant used to kill the anthrax that was discovered in the Hart Senate building.

In 2003 EFT enhanced EasyDECON[™] by adding a third component. Our product now neutralizes chemical agents and kills biological agents twice as fast. In 2004 EFT produced an Indoor Air Quality Product tailored for the eradication of mold and its micotoxins. EasyDECON[™] is a blend that includes ordinary household substances such as those found in hair conditioner and laundry detergent that neutralize both chemical and biological agents in less than 30 minutes, but is environmentally friendly and easy to apply. Once applied, the solution draws the contamination into the liquid where the hazard is chemically altered, rendering the contamination harmless.

Clandestine Meth Lab Decontaminant

In 2005 EFT launched field tests to study the remediation of clandestine meth labs. Working with professional remediators and industrial hygienists, EFT developed initial remediation protocols. Several structures were remediated spanning across the nation. In each instance, Crystal Clean removed the residual meth and brought post test samples to near undetectable levels. The post test results produced first time clearance from the Indutrial Hygienists.

EFT is developing more defined protocols for different meth lab sites. EFT is also working with Sandia National Laboratories and further studying the effects Crystal Clean produces against the methamphetamine molecule. EFT is expanding its study on several substrates with ExperTox of Houston, TX. ExperTox is the leading laboratory for the U.S. Drug Enforcement Agency (DEA).

Performance Data



Anthrax spore kill

In response to a national initiative to combat the domestic chemical and biological warfare (CBW) threat, Sandia National Laboratories has developed Sandia National Laboratories Decon Formulation for mitigation and decontamination of chemical and biological (CB) agents. Sandia National Laboratories Decon Formulation can be deployed as a foam, liquid spray, or fog. EnviroFoam Technologies Is a Licensed Provider of Sandia National Laboratories' Decontamination Formulation.

EnviroFoam Technologies along with Sandia National Laboratories has developed an enhanced version of EasyDECON[™] 100 decontamination solution. EasyDECON[™] 200 has proven to kill or neutralize a broad range of WMD warfare agents faster than EasyDECON[™] 100, yet is less irritating to mucus membranes and remains environmentally friendly.

EasyDECON[™] 200 decontamination solution is now available for the U.S. Military and First Responders/Fire Fighter. The binary blend of EasyDECON[™] 200 has simplified the preparation and EasyDECON[™] 200 can be ready for use in minutes. EasyDECON[™] 200 Liquid Binary Blend consists of a liquid Penetrator, liquid Fortifier and a liquid Fortifier booster.

This revolutionary decontaminant costs less and is faster acting against WMD agents. The following tables show the improved performance of DF-200 as compared to DF-100. The notation 'ND' refers to a concentration below detectable limits. For DF-100, performance data is given for both the optimal pH against a specific agent and for an intermediate pH (9.2) where the formulation works against all agents (but not optimally against any agent).

Traditional decontamination products are based on bleach, chlorinated solvents, or other hazardous or corrosive materials. Many work against only a limited number of either chemical or biological agents and are extremely caustic. EasyDECON[™] 200 will not damage or stain most fabrics and is safe to use on most surfaces. EasyDECON[™] 200 solution is an environmentally-friendly blend that includes ordinary household substances -- such as those found in hair conditioner and laundry detergent. When used as directed, EasyDECON[™] 200 solution has proven to neutralize a broad range of contaminants, while at the same time is non-corrosive and adds no environmental load to the appropriate clean-up operation. Once applied, the solution draws the contamination into the liquid where the hazard is chemically altered and thoroughly oxidized, rendering the contamination harmless.

Performance Against Chemical Warfare Agents

In Sandia National Laboratories tests of Sandia National Laboratories Decon Formulation performance against chemical warfare (CW) agent simulants, halflives for the decontamination of the simulants were on the order of minutes. Also, nuclear magnetic resonance (NMR) studies demonstrated that destruction of the CW simulants occurred without formation of potentially toxic byproducts. The simulant test results were confirmed by a facility licensed to perform live CW agent testing. The formulation was deployed as foam, and the half-lives for the decontamination of the live CW agents were on the order of 2 to 15 minutes.

Formulation	Mustard Simulant (% Decontaminated)			
Formulation	1 Minute	15 Minutes	60 Minutes	
DF-100 (pH 8)	18	42	81	
DF-100 (pH 9.2)	16	38	83	
DF-200	94	98	ND	

Figure 1: Summary of the reaction rates for the Mustard simulant (2-Chloroethyl phenyl sulfide).

Formulation	VX Simulant (% Decontaminated)			
Formulation	1 Minute	15 Minutes	60 Minutes	
DF-100 (pH 10)	45	99	ND	
DF-100 (pH 9.2)	33	71	93	
DF-200	66	99	ND	

Figure 2: Summary of the reaction rates for the VX simulant (0-Ethyl S-ethyl Phenylphosphonothioate).

Formulation	G Agent Simulant (% Decontaminated)			
1 officiation	1 Minute	15 Minutes	60 Minutes	
DF-100 (pH 8)	53	ND	ND	
DF-100 (pH 9.2)	ND	ND	ND	
DF-200	ND	ND	ND	

Figure 3: Summary of the reaction rates for the 0 Agent simulant (Diphenyl chiorophosphate).

Formulation	Anthrax Simulant % Kill after 30 Minute	Anthrax Simulant % Kill after 60 Minute
DF-100 (pH 8)	99.99	99.99999
DF-100 (pH 9.2)	90	99.9
DF-200	99.99999	99.99999

Figure 4: Summary of the kill rates for the Anthrax simulant (Bacillus globigli spores)

Live agent tests on three chemical agents (soman, VX, and mustard) and two biological agents (anthrax spores and Yersinia pestis) were conducted at the Illinois Institute of Technology Research Institute (IITRI) in Chicago, Illinois. The results of kinetic testing of DF-200 on the chemical agents is shown in Figure 5.

Chamical Agant	% Destruction of Chemical Agent at Time Interval			
Chemical Agent	1 Minute	15 Minutes	60 Minutes	
GD	99.98 ± 0.01	99.97 ± 0.01	99.98 ± 0.01	
VX	91.20 ± 8.56	99.80 ± 0.08	99.88 ± 0.04	
HD	78.13 ± 10.53	98.46 ± 1.43	99.84 ± 0.32	

Figure 5: Reaction rates in kinetic testing for DF-200HF against chemical agents.

Detection of very low levels of GD in the 15 and 60 minute samples was determined to be from carryover in the gas chromatography columns and not from unreacted agent.

Results of tests utilizing DF-200 against anthrax spores is shown in Figures 6 and 7 and against Yersinia pestis (i.e., the plague bacterium) are shown in Figure 8 (NG refers to 'no growth'). The detection limit for these tests were 10 CFU/ml. Note that the 'error bars' in the '% Reduction' column takes into account this detection limit.

<i>B. anthracis</i> AMES- RIID	Average CFU/ml	Log Reduction	% Reduction	
Control	1.21 E+07	0	0.00	
15 min contact	NG	7	$100 \pm .00004$	
30 mm contact	NG	7	100 ± 00004	
60 mm contact	NG	7	100 ± 00004	
Figure 6: Kill rates for B. anthracis AMES-		R1ID spores in a solution of DF-200HF.		
B. anthracis ANR-1	Average CFU/ml	Log Reduction	% Reduction	
Control	6.42E+07	0	0.00	
15 min contact	NG	7	$100 \pm .00004$	
30 mm contact	NG	7	100 ± 00004	
60 mm contact	NG	7	100 ± 00004	

Figure 7: Kill rates for B. anthracis ANR-1 spores in a solution of DF-200HF.

Y. pestis (ATCC 11953)	Average CFU/ml	Log Reduction	% Reduction
Control	1.33E+07	0	0.00
15 min contact	NG	7	$100 \pm .00004$
30 mm contact	NG	7	100 ± 00004
60 mm contact	NG	7	100±00004

Figure 8: Kill rates for Y. pestis cells in a solution of DF-200HF.

The petri dishes used for cell growth on each of these tests were saved for 21 days following the tests to verify that DF-200 actually killed the spores rather than just inhibited their growth. No growth on any of the petri dishes was observed after the 21 day period.

Performance on Substrates

In a test of the effectiveness of the Sandia National Laboratories Decon Formulation on decontaminating a variety of substrate surfaces and orientations, the foam was deployed on seven different substrates. In these tests, the G-agent simulant (diphenyl chlorophosphate) was used. After exposure to the foam for 15 minutes, less than 5 mg of unreacted simulant on each substrate remained.



EnviroFoam Technologies, in conjunction with Sandia National Lab and other accredited test facilities has test data highlighting the biological kill capability of EasyDECON solution.

Other Contaminates

There are several chemical and biological agents that can be reproduced and disseminated. The cost and availability of these agents make them difficult but not impossible to obtain. Some of these contaminants are fast acting and can cause widespread illness or death. EasyDECON[™] 200 was designed to counter these contaminants as well. In several comparison tests using other decontaminants and EasyDECON, EasyDECON[™] 200 proved extremely effective.

Kinetic testing and contact hazard tests have been conducted at ECBC on live chemical agents. Results from the reaction rate tests (kinetic tests) are compared to DS2. DS2 is the current decontaminant used by the military. DS2 is extremely caustic and hazardous to the environment.

EasyDECON[™] 200 solution is designed to eradicate a broad range of contaminants. Although it is environmentally friendly, all warnings and cautions must be followed. When used as directed, EasyDECON solution will neutralize contaminants rendering them harmless.

EasyDECON™ Indoor Air Quality



EasyDECON revolutionizes the remediation process for mold and other indoor air contaminants, restoring indoor air quality in as little as 24 hours at a fraction of the cost of traditional remediation.

 Proven effective against all known microbiological contaminants including mold, bacteria, and viruses, EasyDECON also neutralizes mycotoxins, allergens, and the odors they cause. EasyDECON has been tested to be non-damaging and non-staining on nearly all surfaces and fabrics.



EasyDECON Indoor Air Quality 2.5 Gallon Pail Kit

EasyDECON Indoor Air Quality 1 Gallon Pail Kit



<u>Contact EnviroFoam</u> to purchase or inquire about EasyDECON Indoor Air Quality, to find a remediation professional in your area, or to add remediation services to your business.



Proven Effective

EasyDECON has been proven to effectively neutralize chemical and biological warfare agents, including Anthrax, Sarin, Mustard, VX, and Soman; as well as a variety of toxic industrial chemicals.

EasyDECON is EPA registered and has been successfully tested by the US Military and a host of other accredited testing institutions.

Environmentally Friendly

EasyDECON irreversibly breaks down the molecular structure of chemical agents into non-toxic subcomponents, so there are no toxic byproducts. It is safe to pour down drains, to drip onto the ground, or to run off into sewer systems after use without causing any ecological damage.

Non-Corrosive

EasyDECON has been proven safe for use on a wide variety of materials. Concrete, asphalt, wood, ceramic, carpet, fabric, leather, steel and aluminum are just a few of the many surfaces tested.

One Minute Preparation

EasyDECON can be rapidly deployed because the solution can be fully mixed in about a minute. Once mixed, EasyDECON is fully effective for up to 8 hours.

Easy Application

EasyDECON can be used as a foam, liquid, mist, or spray. Foam application has the benefits of providing an easy visual reference for application coverage, greatest coverage per gallon, and allows the formulation to adhere to surfaces to maintain the required contact time.

Easy Clean Up

Because EasyDECON is non-toxic and environmentally benign, clean up is simple using a wet-dry vacuum and water to rinse away the residue.



Personal Incident Decontamina EasyDECON FIDS



Kit contains one pre-measured tote of Penetrator (Part 1), one pre-measured tote of Fortifier, (Part 2) and two pre-measured pails of Fortifier Booster, (Part 3). The kit yields 500-gallons of EasyDECON[™] 200 Decontamination Solution finished blend. This amount is capable of covering an area in foam approximately 37,500 ft² in size.

tion System



EasyDECON 200 Decontamination Solution in a single use spray bottle. This kit contains one pre-measured bottle of liquid Penetrator (Part 1), one pre-measured bottle of liquid Fortifier (Part 2) and one pre-measured bottle of liquid Fortifier Booster (Part 3). Each kit provides 22 fluid ounces of EasyDECON[™] 200 Decontamination Solution.

Product Number: EasyDECON 200-5311

EasyDECON 100 Gallon Drum



Kit contains one pre-measured drum of Penetrator (Part 1), one pre-measured drum of Fortifier, (Part 2) and two pre-measured plastic containers of Fortifier Booster, (Part 3). The kit yields 100-gallons of EasyDECON 200 Decontamination Solution finished blend. This amount is capable of covering an area in foam approximately 7500 ft² in size.

EasyDECON 5 Gallon Pail



EasyDECON 200 in a 6.5 gallon pail kit containing one pre-measured liquid bladder of Penetrator (Part 1), one pre-measured liquid bladder of Fortifier, (Part 2) and a pre-measured plastic bottle of Fortifier Booster, (Part 3). The kit yields five gallons of EasyDECON 200 Decontamination Solution finished blend. This amount is capable of covering an area in compresses air foam approximately 350 ft² in size.

Macaw Backpack Compressed Air Foam System

The Macaw provides versatile power in the world's first totally independent Compressed Air Foam (CAF) backpack. More powerful than standard extinguishers, the multi-purpose Macaw can be used for fire suppression, exposure protection, hazardous materials cleanup as well as decontamination.



- Expands 5 gallons of EasyDECON solution into 250 gallons of finished foam, and propels foam up to 35 feet.
- Expands 5 gallons of fire fighting foam into 350 gallons of finished foam, and propels foam up to 40 feet.
- Allows the operator to adjust the consistency of the foam.

The award-winning Macaw harnesses the strength of stored air energy in a comfortable backpack design. Ease of operation combines with rugged construction to create a portable Compressed Air Foam (CAF) system that is reliable and ready for instant response in the most demanding situations.



The Macaw backpack provides absolute freedom to deploy fast and effectively. This specially engineered miniaturized Compressed Air Foam (CAF) system optimizes standard foams, expanding the five gallons (18.9L) of carried water into as much as 350 gallons (1325L) of fire fighting foam, or 250 gallons of EasyDECON solution, through the unique Enviroshield expansion technology. The Macaw can shoot a stream of fire fighting foam up to 40 feet (12.2m) enabling the user to maintain a safe distance from smoke, flame or heat.

Developed for emergency response professionals, the Macaw has been deployed by military, fire professionals, hazmat teams and civilians alike. Macaw - the ultimate in CAF portability and performance.

Macaw Features



- Totally portable for rapid-fire response
- Fully independent of hoses or other umbilical support systems
- Easy to operate with a foolproof point and shoot activation
- Comfortable for a wide range of body types
- Effective in optimizing the performance of Class A, AFFF, AR-AFFF, protein, fluoroprotein, decontamination foams and hazmat remediation formulas
- Dependable performance, high-quality construction
- Adaptable: utilizes wide range of air cylinders
- Available with optional air compressor port
- Affordable and easily refillable

Techniques, Tactics, and Procedures (TTPs) General Remediation Procedures

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SUGGESTED REMEDIATION OPERATIONS

Remediation operations have a lasting impact on the people that must re-enter the building after it has been cleaned. Instilling confidence that the threat is neutralized is just one part of the remediation process. EnviroFoam Technologies has developed suggested Techniques, Tactics and Procedures (TTP), for the professional remediator to use when faced with a potential chemical or biological hazard. These suggested procedures were used during operations to remediate Senate and House office buildings infected by anthrax spores.

GENERAL

Although bio terrorism is the threat the United States is currently facing, we cannot ignore that the chemical threat exists and could just as easily be employed. A chemical incident will have different repercussions and possibly a far worse outcome. The spreading of chemical agents moves much faster than biological agents. Regardless of the fact that biological contamination is far more persistent, chemical contamination possesses the advantage of affecting humans and infrastructure with a rapid lethality.

Purpose: To establish a set of procedures, practices and guidelines for remediation operations following a chemical or biological incident in a specific location.

Objectives:

- To ensure all personnel have a clear and concise understanding of the magnitude of remediation.
- Provide a consistent checklist of procedures that follow a common sense approach, forbidding the spread of any contamination.
- Maximize resources and personnel to effectively neutralize any suspected contamination.

Responsibility: These procedures establish certain responsibilities for sampling teams, contact teams and remediation teams throughout the remediation process. This document not only focuses on operational guidelines, but includes safety procedures ensuring the well being of all individuals involved.

OVERVIEW OF REMEDIATION OPERATIONS

Specific areas suspected of contamination require different types of remediation and logistical support. Each suspected area or setting along with the potential for a variety of agents must be addressed on an individual basis.

The art of remediation is a team effort involving several agencies and personnel. The personnel involved are trained in the protection, containment and decontamination of chemical and biological hazards.

The threat of spreading the contamination is real and at the forefront of every operation. To kill the hazard, the hazard must first be identified, contained and then eliminated.

NON-SPECIFIC GUIDELINES IN REMEDIATION

Notification: Upon notification of suspected contamination evacuation plans are put into effect. Personnel in and around the area are centralized and segregated immediately. A perimeter of no less than 100 feet is placed around the suspected area or building.

Medical Support: Humans suspected of exposure are examined by qualified medical personnel. The medical staff, along with supporting agencies, makes the determination for the disposition of each patient.

Traffic to and from the perimeter of the suspected site is controlled. Access is denied to all unprotected humans. Upon completion of all control measures, qualified authorities will determine the best course of action.

Sampling detections operations are the first step in the remediation process. We must know without a doubt what it is we are battling against. Furthermore, we must know where it is and the extent of the contamination.

NON-SPECIFIC REMEDIATION OPERATIONS (PLANNING)

In planning the remediation effort, certain key elements exist that when overlooked, will hamper any operation. Communication between agencies is vital. The sharing of real time information is critical to the success of the remediation efforts. Cooperation is the key to effectively planning, executing and evaluating the operation.

In any office setting there are several factors that must be considered prior to implementing any type of remediation process. Some of these factors lend

themselves to common sense, while others can quickly evade even the most thought out plan. Factors to consider, but are not limited to are:

- Square footage of the suspected contamination. This includes any and all adjacent rooms not sealed off from the prime suspected room.
- Updated blue prints of the suspected area with perimeter marking to identify the contaminated area.
- Specific equipment such as mail sorters, strapping machines, computers and printers will play a major role in the remediation process. Other items to consider are storage areas, restrooms, cubicles, ceiling height overhanging pipes, electrical conduit and windows must be factored in during the planning process.
- Then there is the furniture, pictures, antiques, artifacts, personal keepsakes that must be remediated, yet preserved if at all possible.
- Lastly and not to be overlooked, is the documentation and historical records.

These kinds of obstacles were in front of EFT personnel prior to entering the contaminated area or "Hot Zone". With the assistance of all agencies involved, these obstacles were breeched and from it all, a set of procedures evolved.

In all planning, intelligence is the back bone of the operation. Knowing what you are up against is half the battle. The intelligence sought must be real time and as detailed as possible. If the information is vague or not substantiated, the execution phase is sure to be hampered. "Hot spots" or sampling areas known to have produced a positive reading are critical to the remediation process. A list of all agencies involved and there respective area of responsibility is critical. Knowing who is supporting the effort and in what manner, will aid in the speedy remediation of the suspected site.

All of the logistical support plays a vital role in the success of the operation. Once the intelligence has been confirmed it is now time to make the plan. The plan must include at a minimum:

- The amount and type of EasyDECON[™] solution for use is dependent upon the area perimeter and the contamination. This also includes all of the obstacles mentioned above. To remediate everything in the office, everything must be considered.
- Support equipment such as personal protective equipment (ppe), site decontamination equipment for personnel and clean up equipment must be well thought out and implemented into the overall plan.
- Another key element is the support from other on site agencies. Sub contractors play a vital role in the preparation and execution of the remediation.

NON-SPECIFIC REMEDIATION OPERATIONS (PRE-EXECUTION)

Prior to entering the contaminated area or "Hot Zone" a thorough reconnaissance of the suspected area must be completed by the actual remediation team. The recon team will establish the requirements for remediation by identifying key obstacles that must be removed or altered prior to the application of the actual decon solution. A team is then sent in to prepare the room for remediation. Their sole objective is to remove all items that are not crucial for the suspected area. The team must ensure that the team applying the foam can enter the area unobstructed, apply the foam without having to rearrange the area during the process, and exit the area quickly. The preparation team will perform the bulk of the work load. It will take time to prepare the area for remediation. The more time spent in the preparation will pay large dividends during the foam application and clean up.

NON-SPECIFIC REMEDIATION OPERATIONS (EXECUTION)

The EasyDECONTM foam solution is applied to all areas designated by the operations plan. This could include an entire room from the ceiling to the floor, or just one specific area having EasyDECONTM foam applied. Once the foam is applied, the area is sealed off and the area is to remain undisturbed for 60 - 90 minutes.

NON-SPECIFIC REMEDIATION OPERATIONS (POST-EXECUTION)

Once the required time has past, a clean up team is sent in with the required equipment to complete the remediation process. Equipment should include but is not limited to:

- Concentrated anti foam in garden insecticide sprayers.
- Wet/Dry Vacuum cleaners.
- HEPPA filtered vacuums
- Sponge mops.
- Sponges and paper towels.
- Pails and buckets
- 55 gallon drums (palletized) for hazardous waste.

The clean up team will evacuate the area of all residual residue. All furniture, desk tops, walls and equipment will be wiped clean with clean water and antifoam solution. Anti foam solution will be applied to all floors, carpets, drapes, curtains and upholstery. Wet/Dry vacuum cleaners will remove the foam residue from these surfaces.

Once the clean up team is finished with this part of the operation a reconnaissance team is sent back in to inspect the final outcome of the clean up. Once the clean up process is complete, routes and entrances to the Hot Zone must be remediated in the same manner as the primary area.

NON-SPECIFIC REMEDIATION OPERATIONS (SAMPLING)

Agencies tasked with the responsibility of ensuring the contaminated area is remediated will move in and conduct sampling operation in accordance with their sampling plan. Once the area has been cleared, restoration and re-supply of the area can begin.

These procedures outlined in this document were used in two separate incidents at the Senate and House of Representatives offices with 100% success. The offices and equipment were restored to their original operating

capacity. Degradation of the interior was minimal and clean up was quick and effortless.

a strate	Client: Address:	Century Environmental 1720 West Mulberry St.	Hygiene , Suite B-1, Fo	rt Collins, CO 8	30521		
	Site Location:	1322 W. 7th St. Greeley	Co.				
And the second s	Report Date:	June 20, 2005					
	Date of Analysis:	June 13, 2005					
	Report No.:	CEH0613					
Morse Environmental, Inc. PO Box 1557			Report	of Analytical F	al Results		
Aubum, WA 98071	Sample No.	Area Sampled Main Floor	Analysis Meth	Method GC/MS	Result <0.02	Units ug/100cm^2	
MetroLab	06130500-02	Stainwell	Meth	GC/MS	0.67	ug/100cm^2	
_ = .	06130500-03	Basement Kitchen	Meth	GC/MS	32.22	ug/100cm^2	
	06130500-04	Basement Apt.	Meth	GC/MS	<0.02 ·	10g/100cm12	
LEGACY	06130500-05 06130500-06	Basement HVAC Field Blank	Meth	GC/MS GC/MS	<0.02	ug/100cm*2	
	<0.02=Non-Detected						
Legacy Laboratory Services 1225 NE 2nd Ave. Portland, OR 97232	. :						
Office: 253.887.1550 Fax: 253.887.1449							

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MetroLab



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Office: 253.887.1550 Fax: 253.887.1449 Client: Century Environmental Hygiene Address: 1720 West Mulberry St., Suite B-1, Fort Collins, CO 80521 Site Location: 610 05 Meyer Report Date: July 29, 2005 Date of Analysis: July 29, 2005

Report No.: CEN0726A

		Report	of Analytical F	tesults	
	Arren Commined	Applymin	p.1	Result	Linits
Sample No.	Area Sampled	Analysis	Mediloo	10000	un/100cmb2
072505JD-01	100cm*2	Meth	GC/MS	<0.02	ug/100catr-2
072505 ID-02	100cm*2	Meth	GC/MS	<0.02	ug/100cm^2
072505JD-03	200cm^2	Meth	GC/MS	<0.02	ug/100cm^2
072505 10-04	200cm^2	Meth	GC/MS	<0.02	'ug/100cm^2
072505JD-05	200cm^2	Meth	GC/MS	<0.02	ug/100cm^2
072505JD-06	100cm^2	Meth	GC/MS	<0.02	ug/100cm^2

<0.02=Non-Detected

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Chadrick Morse Principal Chemist Morse Environmental, Inc.

Rowert M. Afake

Robert Hara Toxicologist Legacy Metrolab

Crystal Clean

Introduction

EFT is proud to introduce a new and revolutionary decontaminant to professional remediators for the safe removal and neutralization of methamphetamine. Crystal Clean has proven to reduce levels of methamphetamine after one application. In every field case study, Crystal Clean reduced the overall remediation costs by over 50%. Crystal Clean was able to reduce the overall manpower, equipment and supplies necessary to meet State guidelines. Crystal Clean is EPA registered, biodegradable, non-toxic, environmentally safe, reliable and cost effective. Clean up of the product only requires fresh water and sponges.

Product Development

HISTORY

In July 2000, Sandia National Laboratories provided non-exclusive, all field-of-use licenses to EFT of Huntsville, AL for manufacture and sales of the Sandia National Laboratories' decontamination technology. EFT currently produces and sells the decontamination solution as EasyDECONTM. EasyDECONTM was developed through funding provided by the U.S. Department of Energy's and National Nuclear Security Administration's Chemical and Biological National Security Program (CBNP). EasyDECON has been deployed globally to military operation theaters. EasyDECON was the first decontaminant used to kill the anthrax that was discovered in the Hart Senate building.

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Clandestine Meth Lab Decontaminant

In 2005 EFT launched a field study for the remediation of clandestine meth labs. EFT reformulated EasyDECONTM 200 and renamed the product Crystal Clean. Working with professional remediators, EFT developed initial remediation protocols. A total of 12 separate structures were remediated spanning across the nation. In each instance, Crystal Clean removed the residual meth and brought post test samples to near non detectable levels. The post test results produced first time clearance from the Certified Industrial Hygienist.

EFT is developing more defined protocols for different meth lab sites. EFT is also working with Sandia National Laboratories and further studying the effects Crystal Clean produces against the methamphetamine molecule. EFT is expanding its study on several substrates with ExperTox of Houston, TX. ExperTox is the leading laboratory for the U.S. Drug Enforcement Agency (DEA).

Please call us at (256) 489-9245 and join our team in the fight against this epidemic. Visit <u>www.easydecon.com</u> for more information about our product.



No Fire® Paint

There are virtually endless possibilities for the use of NoFire® Products. Major applications include:



- Commercial/Industrial HVAC and Electrical Infrastructure
- Maritime Industry
- Interior/Exterior Residential Housing Industry
- Governmental Offices and Landmarks
- Port Authorities
- Ground Transportation Vehicles and Corresponding Infrastructure
- Improving Combustibility Rates For Plastic and Wood Construction
- Materials
- Military
- Aviation/Aerospace Industry
- Oil and Gas Industry
- Assembly Halls, Sporting Venues, Airport Lobbies, Schools, Virtually
- Anywhere People Congregate

NoFire® does everything that ordinary paint does...

Except Burn!





Crystal Clean

Remediation Protocols

Crystal Clean methamphetamine decontaminant was developed to provide an effective solution for the reduction in methamphetamine levels identified by sampling. Once applied, Crystal Clean has proven to reduce methamphetamine levels to near non-detectable levels after only one application.

Remediators should always refer to State and local guidelines before beginning the remediation process.

Site Preparation

Contaminated structures should be prepped in the exact same manner as with traditional remediation. Containment barriers and negative air flows should be used as warranted. All personal property to include carpet, drapery and other items not apart of the physical structure should be removed and disposed of in accordance with state and local guidelines. Ambient temperatures should be above 45° F during and after the decontamination process.

Inspect each room of the structure:

- 1. Ensure light switches, outlets and any other electrical receptacles are covered with tape.
- 2. If possible, shut all breakers to the structure during the decontamination process.
- 3. Using electrical tape, cover any exposed electrical wiring.
- 4. Open all closet, cabinet and cupboard doors.
- 5. Close all windows.
- 6. Ensure all debris is collected.

Decontamination

Mix Crystal Clean in accordance with the manufacturer's directions. Ensure all personnel involved in the actual decontamination process have the proper PPE to include a full face respirator. Using a Compressed Air Foam (CAF) system or similar spraying device, apply Crystal Clean to all surfaces.

Amounts of product applied will vary slightly with each operator. Starting from the top of the wall, apply a film of Crystal Clean that covers the entire surface leaving no gaps in the spray pattern. Work the spray down to the floor. Be sure to spray in all closets, cabinets and cupboards to include fixtures such as lights, sinks, bathtubs, toilets and shower stalls. Once all walls are covered, spray the floor surface leaving the ceiling for last. At the farthest point in the room from the door exit, spray the ceiling working your way out of the room. This technique will alleviate excess over spray falling on the operator.

Allow Crystal Clean to remain undisturbed for one hour. After one hour dwell time, Crystal Clean can be removed using a squeegee and fresh water with damp sponges, rags or sponge mops with frequent rinsing. If a wet/dry vacuum is used to remove excess, EFT recommends adding de-foamer to the reservoir to avoid foaming.

Once clean up is complete sampling can be performed by an Industrial Hygienist.



No Fire® Paint

There are virtually endless possibilities for the use of NoFire® Products. Major applications include:



Commercial/Industrial HVAC and Electrical Infrastructure

Maritime Industry

Interior/Exterior Residential Housing Industry

Governmental Offices and Landmarks

- Port Authorities
- Ground Transportation Vehicles and Corresponding Infrastructure
- Improving Combustibility Rates For Plastic and Wood Construction

Materials

- Military
- Aviation/Aerospace Industry
- Oil and Gas Industry
- Assembly Halls, Sporting Venues, Airport Lobbies, Schools, Virtually
- Anywhere People Congregate

NoFire® does everything that ordinary paint does...

Except Burn!



1. ADVANTAGES

- A. A "passive" system that requires no moving parts
- B. Thin Film requires little space
- C. No maintenance required
- D. Easy to apply dries to attractive finish

2. COMPARISON OF INTUMESCENT COATING

	EPOXY (2 PARTS)	SOLVENT	WATER BASED	NOFIRE®
TOXICITY / ENVIRONMENTAL HAZARD	HIGH	HIGH	LOW	NONE
CONTAINS HAZARDOUS INGREDIENTS	YES	YES	SOME	NO
SPECIAL EQUIPMENT REQUIRED	YES	YES	NO	NO
PERFORMANCE	HIGH	MODERATE	LOW	HIGH
NUMBER OF REQUIRED APPLICATIONS	MULTIPLE	MULTIPLE	MULTIPLE	ONE
COST	HIGH	HIGH	MEDIUM	MEDIUM
MILITARY, GOVERNMENTAL APPROVALS	NO	NO	NO	YES

3. NO OTHER INTUMESCENT PRODUCT CAN CLAIM THE FOLLOWING

LIST OF CLIENTS

- OU.S. Department of Defense
- **OULS. State Department**
- U.S. NASA (Space Shuttle Program)
- New York Metropolitan Transit Authority (Subway System)
- London Heathrow Airport Light Rail (Via Bombardier)
- Several Nuclear Power Facilities in the U.S. and Europe

4. NO OTHER INTUMESCENT PRODUCT HAS THE FOLLOWING APPROVALS/CERTIFICATIONS

UL Listed

Germanischer Lloyd

ASTM Class "A" Rated

Lloyds Register

EC Approved

American Bureau of Shipping

International Marine Organization

U.S. Coast Guard

5. INCLUDES 5 YEAR WARRANTY AGAINST MOLD

Q: What's the difference between 'fire retardant' 'fire protective' and 'fire proof'?

A: In our industry we have specific definitions for each, which is why we specifically claim our product to be 'fire retardant.

Q: Are there other fire retardant coatings on the market? What are the differences?

A: Yes, there are other products, all with different levels of performance, application thickness required, toxicity, durability, ease of application and approvals for use.

Q: Can I mix nofire with other paints or finishes to make them fire retardant?

A: No, NoFire works only as a coating, not when mixed with other paints.

Q: Can I thin NoFire?

A: We don't recommend it, if you think your paint or coating is too thick, contact our technical department.

Q: What's the shelf life of NoFire in its container?

A: We guarantee the product for 1 year after we ship it.

Q: How long does NoFire last after it is applied?

A: Under normal conditions, NoFire will not lose its fire protection abilities.

Q: What finishes does NoFire come in?

A: NoFire comes in a matte finish, but a glossy or semi-glossy finish can be obtained by using one of our top coatings

Q: What colors does it come in?

A: Our base color is white, but we can mix it for any color you want.

Q: Can I tint NoFire to another color?

A: No, we need to mix it to the color you want

- Q: Does it come clear?
- A: No
- Q: Can it be used outdoors?
- A: Yes, but only with a protective top coat
- Q: How do I apply it?

A: Just like normal paints, a brush, roller, or paint sprayers will all work.

Q: How thick is it when applied?

A: NoFire's thickness depends on your project's requirements. You should consult the Application Manual and Technical Data sheets to find the thickness you need.

Q: Can I order it to be thicker or thinner than normal?

A: Yes, we can vary the products viscosity upon request.

Q: Is NoFire toxic?

A: No, NoFire is a nontoxic, water-based coating

Q: Should I be worried if I get NoFire in my eyes, mouth, ears, or on my skin?

A: No, just wash with soap and water and NoFire will dissolve easily.

Q: Is it harmfull if NoFire is swallowed as a liquid or ingested as paint chips?

A: No, refer to our Acute Oral Toxicity Test in the Technical Manuel.

Q: What does Intumescent mean?

A: It describes what our product does. When exposed to heat, an

intrumescent product will expand. When our paint is exposed to heat above

375 degrees F it expands to approximately 20-100 times its normal

thickness. This part of what makes our product so effective.

Q: Is it a coating or a paint?

A: NoFire does both. It is a protective coating that comes in any color and finishes like any other paint.

Q: Do I need to do any special surface preparation?

A: Just like normal paints, the surface needs to be clean and smooth, nothing beyond that.

Q: Does NoFire require a primer?

A: Usually you wont need a primer, but if you're coating anything that may corrode, like enamel or steel in marine environments, a primer is recommended.

Q: What kind of primer do I need for those special surfaces?

A: Many primers work well, but the best are matte finish or rough finish primers. Check with our Technical Department to get specific recommendations for your project.

Q: How long does it take to dry and cure?

A: It depends on temperature and humidity, but in normal room temperature and humidity it takes about 2 hours to dry and between a minimum of 24 hours and a recommended 48 hours to cure.

Q: If I'm applying NoFire outside, what are the minimum and maximum temperatures I should do it in?

A: Temperatures between 40 deg. F and 180 deg. F are fine.

Q: What size are the containers?

A: We have 5 gallon pails or 50 gallon drums.

Q: Does NoFire have a 'one hour' or 'two hour' rating?

A: Each of our products does not have a rating to themselves, but each system does. All the ratings for each system are in the Technical Manuel.

Q: What should I do if I accidentally crack or chip some of the dried paint?

A: Just touch it up like you would any normal paint. There won't be any loss of protection.

Q: Can I spray NoFire on my furniture, drapes or carpets to make them fire retardant?

A: No, NoFire only works as a coating on hard, smooth surfaces.

Q: What types of surfaces will it protect?

A: Nearly all smooth, hard surfaces such as wood, wood products, metals, and composites. NoFire will not work on soft surfaces like upholstery or carpets.

Q: How do I clean up after I'm done?

A: Just wash your brushes, rollers, surfaces, and skin with soap and water.

Q: Do you have approval for ASTM E119 on structural steel?

A: Yes, our patented S-Barrier wrap system meets all these requirements.

Q: Can you make curtains and wallpaper from your textile materials?

A: No

Q: Does NoFire insulate?

A: Not at room temperature, the insulating properties only activate at high temperatures.

- Q: Is it class A Rated?
- A: Yes
- Q: Is it UL Classified?
- A: Yes