



Individual Equipment Decontamination Mitt

Decontamination that fits in a pocket!

The power and capabilities of FAST-ACT (First Applied Sorbent Treatment – Against Chemical Threats) are now available in the form of an Individual Equipment Decontamination Mitt.

The FAST-ACT Individual Decontamination Mitt contains FAST-ACT powder in a pad with a polyethylene backing. The mitt slips over the user's glove so they can apply free-flowing powder for chemical decontamination.

FAST-ACT can be safely applied to liquid contamination enabling Soldiers and Emergency Responders to decontaminate their equipment when faced with a wide variety of known or unknown chemical hazards. FAST-ACT is a rapid and effective way to safely neutralize toxic releases efficiently reducing life-safety threat, equipment, and cost.

Effective against TICs, TIMs, and CWAs

- Acids
- Halogenated Compounds
- Phosphorus Compounds
- Organic Compounds
- and more



FAST-ACT Individual Equipment Decontamination Mitts

- Safe and easy to use.
- Designed to decontaminate equipment: mask/hood, gloves, footwear, weapon, helmet, etc.
- Reduces cross contamination among equipment and personnel.
- Minimizes chemical exposure.
- Conveniently sized and packaged.



The FAST-ACT Individual Equipment Decontamination Mitt is available in boxes of 80. Each mitt is enclosed in a protective packet ready for use.

TIMILON



FAST-ACT Individual Equipment Decontamination Mitt



FAST-ACT (First Applied Sorbent Treatment – Against Chemical Threats) can be safely applied to any liquid spill or vapor release enabling Emergency Responders to utilize one system when faced with a wide variety of known or unknown chemical hazards. Offered in individual equipment decontamination mitts, pressurized cylinders, shaker bottles, bulk pails, and personalized protection paks, FAST-ACT allows for the effective treatment of both liquid and vapor hazards. FAST-ACT is a rapid and effective way to safely neutralize toxic spills efficiently reducing life-safety threat, on-site management time and cost.

DESTRUCTION OF CHEMICAL WARFARE AGENTS

Chemical warfare agents can only be destroyed if their chemical structure is modified. Nerve agents, such as sarin, soman, tabun and VX all are phosphorus containing compounds, which can be chemically detoxified through breakage of the P-S bond. FAST-ACT destroys these agents by supporting immediate reactions such as hydrolysis and dehalogenation. Blistering agents, such as distilled mustard contain sulfur and chlorine groups that are also neutralized by FAST-ACT through hydrolysis and dehydrohalogenation reactions.

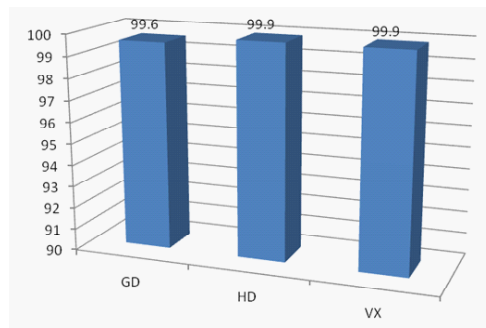
FAST-ACT's effectiveness against CWAs has been validated by two independent laboratories; Battelle in Columbus, OH and ECBC in Edgewood, MD. Two types of nerve agents GD (Soman, 1,2,2-trimethylpropyl methylphosphonofluoridate) and VX (O-ethyl S-diisopropylaminomethyl methylphosphono-thiolate) and a blistering agent HD (Distilled Mustard, bis(2-chloroethyl) sulfide) were tested.

The objective of ECBC testing was to determine the reactivity of FAST-ACT and identify reaction products. In these tests FAST-ACT was placed on the agent contaminated metal surface. After a short agitation the powder was placed in a solid state NMR tube and the amount of undecomposed agent, if any, as well as reaction products were determined by ¹³C and ³¹P MAS NMR.

SURFACE DECONTAMINATION

Within 90 seconds FAST-ACT removed over 99.9% of HD and VX and over 99.6% (detection limit) of GD from the surface as seen in the figure below. Over time the adsorbed agents were destroyed by FAST-ACT.

FIGURE: EFFECTIVENESS OF FAST-ACT TOWARDS REMOVAL OF CHEMICAL WARFARE AGENTS FROM SURFACES



AGENT DESTRUCTION

Upon contact with FAST-ACT the agent is quickly adsorbed and then destroyed. The destruction is confirmed by changes in the NMR spectra (ECBC) and by inability to extract the agent from the powder (Battelle).

In 10 minutes 99% of GD and over 99.9% of VX is destroyed. After 60 minutes 70-80% of HD is destroyed.

MECHANISMS OF AGENT DESTRUCTION

FAST-ACT destroys chemical warfare agents through hydrolysis and/or dehydrohalogenation. Nerve agents are hydrolyzed with the formation of surface bound metal phosphonates. Mustard agent undergoes hydrolysis to form surface bound metal alkoxides or dehydrohalogenation to form vinyl and divinyl HD.

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