



**(First Applied Sorbent Treatment - Against Chemical Threats)**

**CHEMICAL HAZARD CONTAINMENT AND  
NEUTRALIZATION SYSTEM**

**USER MANUAL**

**Pressurized Cylinders**

**Shaker Bottle**

**Bulk Pail**

**Mitt**

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## INTRODUCTION

FAST-ACT® (**First Applied Sorbent Treatment – Against Chemical Threats**) is a proprietary formulation of non-toxic advanced specialty materials effective at neutralizing a wide range of **toxic chemicals** with the added capability to destroy **chemical warfare agents**. The FAST-ACT formulation is non-flammable, non-corrosive and can be safely applied to any liquid spill or vapor release enabling Emergency Responders to utilize one technology when faced with a wide variety of known or unknown chemical hazards. Since the dry powder absorbs all spills and is effective against both liquid and vapor hazards upon contact, on-site incident management and clean up times are reduced.

FAST-ACT is offered in pressurized cylinders capable of addressing both liquid and vapor hazards as well as manually dispersed containers for liquid hazard treatment and mitts for individual equipment or surface decontamination.

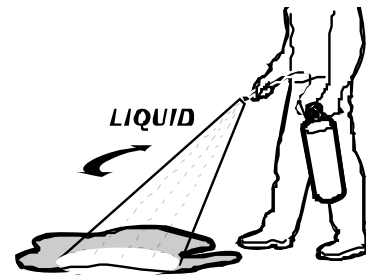
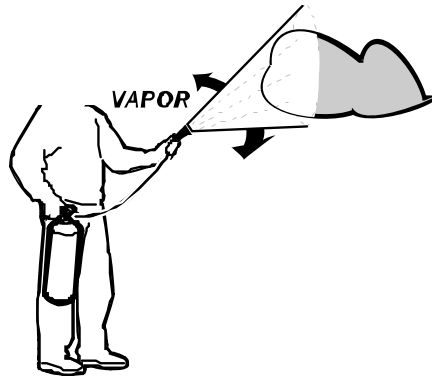
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## I. INSTRUCTIONS FOR USE AND APPLICATION

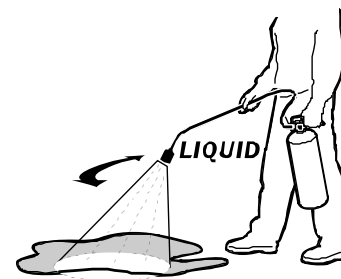
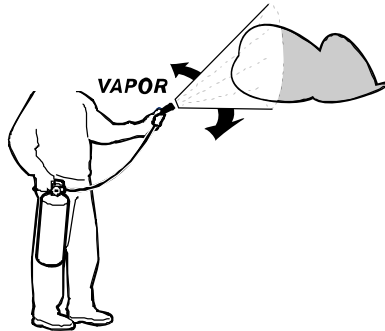
### Pressurized Cylinders

1. Pull ring pin.
2. Squeeze the lever and shake cylinder in up and down motion to ensure maximum clean-out.
3. For vapor hazard aim hose and mist all powder in direction of hazard.
4. For liquid hazard sweep hose side to side to ensure complete coverage of hazard.



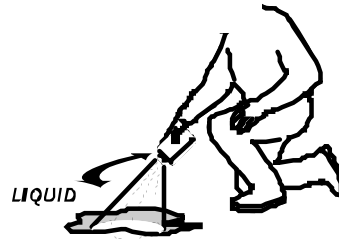
### Pressurized Cylinder (4-Kg) with an optional applicator wand

1. Pull ring pin.
2. Squeeze the lever and shake cylinder in up and down motion to ensure maximum clean-out.
3. For vapor hazard *detach applicator wand* and aim hose in direction of hazard. Mist all powder into air in direction of hazard.
4. For liquid hazard sweep applicator wand side to side to ensure complete coverage of hazard.



## Shaker Bottle

1. Unscrew lid.
2. Apply powder forming a ring around the hazard and then shake the powder directly onto hazard to thoroughly cover the liquid.



3. Agitate powder to ensure all liquid has been adsorbed.

## Bulk Pail

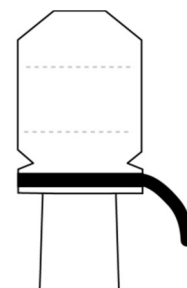
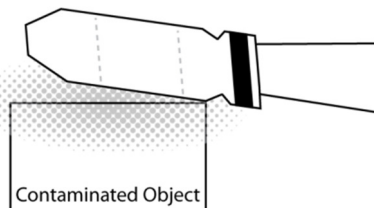
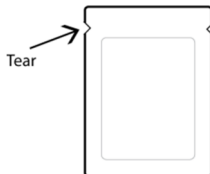
1. Unscrew lid.
2. Apply powder forming a ring around the hazard and then scoop powder directly onto hazard to thoroughly cover the liquid.



3. Agitate powder to ensure all liquid has been adsorbed.

## Mitt

1. Tear packet at notch and remove decon mitt.
2. Unfold mitt and insert hand, tightening strap.



3. Decontaminate surface by rubbing with pad side to remove liquid contamination. If liquid contamination is still present or suspected, repeat process with a new decon mitt.

## II. GUIDELINES FOR UNIT SIZE SELECTION

FAST-ACT neutralizes a broad range of acids including phosphoric, sulfuric, nitric hydrochloric and hydrofluoric. Using concentrations at which the acids are commonly transported, the amount of spill that can be neutralized using various FAST-ACT units is shown in Table 1.

**Caution: Neutralization of acids and selected aqueous solutions generates heat.**

**Table 1: Guidelines for Maximum Acid Spill Sizes that can be Neutralized by Various FAST-ACT Units.**

<i>Type of Acid</i>	<i>500 grams</i>	<i>1-Kg</i>	<i>2-Kg</i>	<i>4-Kg</i>	<i>5-Kg</i>
	<i>Liters</i>	<i>Liters</i>	<i>Liters</i>	<i>Liters</i>	<i>Liters</i>
85% H <sub>3</sub> PO <sub>4</sub>	0.35	0.76	1.42	3.03	3.41
94% H <sub>2</sub> SO <sub>4</sub>	0.30	0.57	1.23	2.27	3.03
70% HNO <sub>3</sub>	0.95	1.89	3.79	7.57	9.46
37% HCl	1.24	2.27	4.54	9.84	12.49
39% HF	0.65	1.32	2.55	5.30	6.44

FAST-ACT absorbs a wide range of organic compounds such as alcohols, aldehydes, chlorocarbons and petrochemicals. Table 2 gives recommendations for unit selection based on the spill size.

**Table 2. Guidelines for Maximum Amount of Organic Spill that can be Absorbed by Various FAST-ACT Units**

<i>Type of Organic Spill</i>	<i>500 grams</i>	<i>1-Kg</i>	<i>2-Kg</i>	<i>4-Kg</i>	<i>5-Kg</i>
	<i>Liters</i>	<i>Liters</i>	<i>Liters</i>	<i>Liters</i>	<i>Liters</i>
Acetone	0.50	1.04	1.99	4.16	5.30
Alcohols	0.35	0.71	1.32	2.84	3.56
Chlorinated hydrocarbons	0.65	1.23	2.46	4.92	6.44
Petrochemicals	0.38	0.76	1.42	3.03	3.79

FAST-ACT neutralizes phosphorus and sulfur containing compounds, such as insecticides and even chemical warfare agents. Table 3 provides information on the amount of agent that can be destroyed using various FAST-ACT units.

**Table 3. Guidelines for Maximum Amount of Liquid Chemical Hazard that can be Destroyed by Various FAST-ACT Units.**

<i>Type of Liquid Chemical Hazard</i>	<i>500 grams</i>	<i>1-Kg</i>	<i>2-Kg</i>	<i>4-Kg</i>	<i>5-Kg</i>
	<i>Ounce</i>	<i>Ounce</i>	<i>Ounce</i>	<i>Ounce</i>	<i>Ounce</i>
Paraoxon	0.6	1.2	2.5	5.0	6.0
DMMP	0.7	1.4	2.9	5.8	7.3
2-CEES	0.8	1.6	3.1	6.2	7.8
VX	0.3	0.7	1.3	2.6	3.3
GD	0.3	0.7	1.3	2.6	3.3
HD	0.2	0.5	1.0	2.1	2.6

FAST-ACT effectively neutralizes or adsorbs acidic and caustic gases as well as oxidizers. Table 4 provides agent concentration in parts per million (ppm) that can be successfully treated (at least 95% reduction) in a 1,000 ft<sup>3</sup> room using various FAST-ACT units. The safety levels for immediate danger and time-weighted average, based on NIOSH, are given as a guide.

**Table 4. Guidelines for Maximum Concentration (in parts per million) of Vapor Hazard that can be Successfully Treated with FAST-ACT Pressurized Cylinders in a 1,000 ft<sup>3</sup> room.**

<i>Type of Vapor</i>	<i>Safety Levels (ppm)</i>		<i>FAST-ACT Unit</i>		
	<b>Immediately Dangerous</b>	<b>TWA* (8 hrs)</b>	<i>1-Kg</i>	<i>2-Kg</i>	<i>4-Kg</i>
			<b>ppm</b>	<b>ppm</b>	<b>ppm</b>
<b>Acidic</b>					
Hydrogen chloride	50	5	865	1730	3460
Hydrogen sulfide	100	20	235	475	950
Sulfur dioxide	100	5	340	685	1370
<b>Caustic</b>					
Ammonia	300	20	215	430	860
<b>Oxidizers</b>					
Ethylene oxide	800	5	125	250	500
Chlorine	10	1	200	400	800

\*TWA = Time Weighted Average

### III. USER CAUTIONS AND WARNINGS

#### Pressurized Cylinders

Do not incinerate. Contents under pressure. Tested to 585 psi (41.13 kg/cm). Do not expose to temperatures over 120°F (49°C). Suitable for use at temperatures from -40°C to 49°C. Improper or careless use may cause severe bodily injury or property damage. Read and thoroughly understand all directions for use before operating.

The unit is non-rechargeable. Partial discharge may cause extinguisher to leak.

**Warning!** Do not check the pressure or test the unit by spraying it.

#### Shaker and Pail

If the seal has been broken, discard product immediately. Prolonged exposure to the atmosphere will degrade product effectiveness. Close lid between uses. Read and thoroughly understand all directions for use before utilizing the product.

### IV. MAINTENANCE AND STORAGE INSTRUCTIONS

#### Shaker and Pail

Inspect the unit at least monthly. Check for signs of damage or misuse. Ensure that all text on the label is still readable. Store in a dry place.

#### Pressurized Cylinders

Inspect frequently (at least monthly) to determine that the hose is unobstructed, that the system is properly pressurized, and that the seal is intact. Examine the surface of the unit for corrosion. If you notice corrosion during the warranty period, return to Timilon Technology Acquisitions LLC (see the Limited Warranty section). Ensure that all text on the label is still readable.

## V. DISPOSAL

A used unit needs to be fully discharged prior to disposal. FAST-ACT is safely disposable, however, EPA requires neutralized hazardous materials to be disposed of as if it has not been neutralized. Therefore, employed product should be disposed of in accordance to local, state and federal regulations. For federal regulations follow 40 CFR 261, Subpart C “Characteristic Hazardous Wastes” and 40 CFR 261, Subpart D “Listed Hazardous Wastes”.

## VI. TROUBLESHOOTING

**Symptom:** The pointer on the FAST-ACT gauge is in the red.  
**Cause:** The unit is over or under pressurized.  
**Solution:** If the unit has not been used and is within the warranty, return to Timilon Technology Acquisitions LLC for replacement (see the next section). If the warranty has expired, completely discharge and discard the unit. Replace it with a new one immediately.

**Symptom:** The powder is not discharging from the pressurized cylinder.  
**Cause:** The powder has settled.  
**Solution:** Shake the cylinder several times in an up and down motion.

**Caution!** **The pressurized cylinder is a disposable, non-rechargeable unit. Do not try to service or repair the unit under any circumstances. Do not remove the nozzle or valve assembly.**

If the information you need is not covered in the questions and answers above, please call us at: 785-246-7074.

## VII. LIMITED WARRANTY

Timilon Technology Acquisitions LLC warrants that for a period of one year from the date of purchase, this product will be free from manufacturing defects. Timilon Technology Acquisitions LLC, at its option will repair or replace the product or any component of the product found to have manufacturing defects during the warranty period. If the product is no longer available, replacement may be made with a similar product of equal or greater value.

This warranty is non-transferable and is valid from the date of the original purchase. Proof-of-purchase and/or your warranty registration card on file is required to obtain warranty performance. This warranty does not cover consequential damages and/or damages resulting from negligent use or misuse of the product by failure to store, maintain and/or use the product in accordance with label directions otherwise. In addition, disassembly, repair or modification by anyone other than Timilon Technology Acquisitions LLC, acts of God, such as fire, flood, hurricanes and tornados will not be covered. To be eligible for the warranty, the unit cannot be partially discharged.

To obtain a warranty service, contact Customer Support at (785) 246-7074 Monday through Friday, 8 am – 5 pm CST. To assist in serving you, please have the model number and date of purchase available when calling.