

CHEMICAL SUICIDE

Safety Alert

In December, 2010, Portland Fire & Rescue responded to its first **“Detergent Suicide”** call. There is an increasing potential for more of these calls that may impact your safety, should you respond on a call to check a patient in a vehicle or a small room. Please review the following information about this important safety topic.

“Detergent Suicide” or “Chemical Suicide,” is a new way to commit suicide by mixing two or more chemicals that can be purchased at local stores. Once mixed, these chemicals produce a heat releasing or exothermic reaction, creating by-product gases that quickly fill the enclosed area. This technique that first originated in Japan, is gaining popularity via instructions posted on the internet. It is often communicated as a quick and painless way to end one’s life.

There have been hundreds of these incidents in Japan over the last several years and now have been seen in the United States – specifically in Idaho, California, Florida and Georgia.

This is an overview of the detergent suicide process:

- In Japan, a brand of **detergent** was combined with **bath salts** – here it is most likely an inorganic acid and a pesticide or garden product
- Usually, tape will be used to seal joints and seams in the room or the vehicle, to contain the toxic products inside
- In most but not all incidents, a **suicide note** will be taped to a door or window, warning responders of the hazards
- Common products from hardware stores are combined in a bucket or tub and quickly overcome the victim, leaving a crime scene and a hazardous materials cleanup site
- The main toxic product is **Hydrogen Sulfide (H₂S)**, which can cause coma and **death at 1000 parts per million** (only 1/10 %)
- There will be evidence of this process – you may note the smell of H₂S upon approach (**sulfur or rotten eggs**) or tubs/buckets in the vehicle, along with multiple chemical product containers

- Common sources for the **acids** may be: Lysol, toilet cleaner, tile, brick or drain cleaners

Common sources for the **sulfur** may be: Dandruff shampoo, Epsom salts, pesticides or fungicides

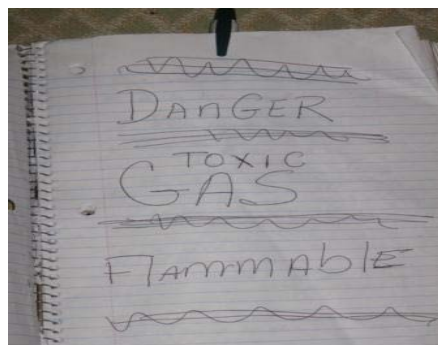
- Possible **toxic products** could include: **H₂S, Sulfur Dioxide, Carbon Monoxide, Acid Gases, Nitrogen Oxides, Phosgene, Carbon Disulfide, Methyl Isocyanate, Thallium**

All Very Toxic Products !!!

On 12-26-2010, Hazmat 7 responded to a Detergent Suicide call, close to the station in SE Portland. This is a synopsis of that incident:



At about 7pm, they responded on a UN1 medical call that morphed into a hazmat call. The mother of the victim checked her 50 year old son and found him unresponsive in his pickup. Note the yellow stain on the driveway.



This note was found inside the victim's home, not on the exterior of the vehicle. A likely scenario is that the victim loses consciousness in 60-90 seconds and may die within 5-10 minutes. This family member noticed strong chemical odors when the door was opened. This patient required treatment, while the crew found the victim DOA.



Upon arrival, HM7 noted the odor of rotten eggs, a yellow stain on the ground below the vehicle and the presence of tubs and chemical containers in the back seat. Note the combination of chemicals needed to initiate the exothermic reaction and release of toxic gas.



The yellow color in the mixing tub is from the element Sulfur that is present in many of the garden chemicals used in this process. *Be aware that Hydrogen Sulfide is only one of many hazardous byproducts of this deadly reaction.*



HM7 monitors detected dangerous readings at the gaps of the truck doors, even when closed. Levels inside the vehicle triggered high alerts on the 4 gas monitor. *Note that H₂S will deaden your sense of smell at about 150 ppm, masking estimates of the on scene danger.*

LESSONS OBSERVED AND ACTION STEPS

- DON'T BECOME COMPLACENT!** Always be aware of ALL on scene clues available to you. Size-up the situation before you act.
- IF THERE IS A SMELL OF SULFUR OR ROTTEN EGGS** – This may indicate the presence of H₂S gas which is very dangerous even at low levels, deadening your sense of smell. Back off and don PPE with respiratory protection before acting. Request fire/hazmat with monitoring capability.
- UNRESPONSIVE PATIENT IN A VEHICLE:** Warning notes or taped door and window seams, glass stains or residue on the ground are a sure sign that you should exercise caution and escalate the response. Call for a hazmat team and police.
- EVIDENCE OF CHEMICALS IN THE VEHICLE** – Typical chemicals, tubs and other equipment mentioned in this bulletin are clues that an active reaction has filled the vehicle with toxic products. **DO NOT ENTER THE VEHICLE FOR PATIENT ASSESSMENT, WITHOUT DONNING FULL PPE !**
- CREATE HAZARD ZONES** – Inside the vehicle is a hot zone. Create an appropriate warm zone around the vehicle. Prohibit entry from anyone not wearing full PPE.
- NOTIFY APPROPRIATE ASSISTANCE** – Call the nearest hazardous materials response team, police and other appropriate agencies. **TREAT THIS AS A HAZMAT SCENE !**
- ENTRY INTO THE VEHICLE** – If the decision is made to enter the vehicle, use full PPE and completely vent the vehicle first. Position the patient **OUTSIDE** the vehicle for assessment. Remember, the atmosphere inside the vehicle is both an inhalation hazard and possibly an explosive hazard.
- IF POLICE NEED TO PERFORM A TACTICAL ENTRY EITHER INTO A VEHICLE OR A SMALL ROOM** – Full SCBA is mandatory and the use of flash-bang or sting ball devices could cause an explosion because of the presence of flammable gases.
- REMEMBER THAT THIS IS A POSSIBLE CRIME SCENE** – Make immediate notifications to Police, Medical Examiner, etc and avoid disturbing any evidence.

- BE ALERT FOR SECONDARY DEVICES** – Scan the vehicle or room for the presence of anything that looks out of place or suspicious. **DO NOT DISTURB OR TOUCH ANYTHING UNNECESSARILY!**
- FIRST AID ACTIONS** – Remove victim(s) from exposure and if appropriate, support breathing. Skin contact with corrosive product may cause burns.
- DECONTAMINATION** – Remove clothing ASAP. For eye or skin exposure, flush with lukewarm water for 15 minutes.
- HAZMAT WASTE** – After victim/patient care and legal scene issues, scene must be treated as a hazmat site. Waste products must be overpacked and handled as hazardous waste by a licensed contractor. Notify appropriate environmental agencies as needed.

For more information, contact Grant Coffey, team coordinator of Portland Fire & Rescue's Hazmat Response Team #6 at: grant.coffey@portlandoregon.gov

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