



CHEMICAL SUICIDES

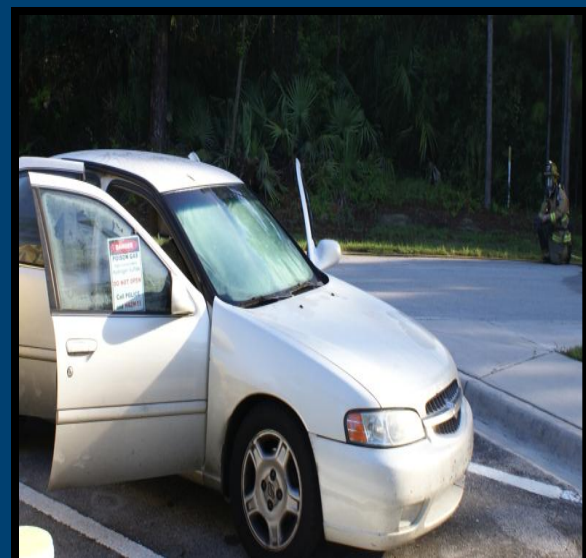
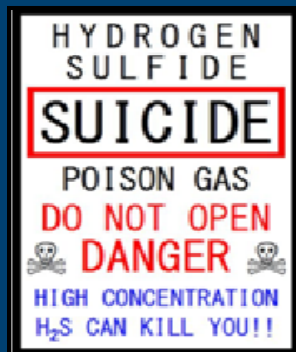
Identification Guide for 911 Communications



The purpose of this document is to provide 911 call takers and dispatchers with a guideline for identifying key components of a chemical suicide .

POLICE LINES DO NOT CROSS

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CHEMICAL SUICIDES

Guide for 911 Communications

CHEMICAL SUICIDE AWARENESS

The first step to preventing injury or death in response to a chemical suicide is awareness. An incident is considered a chemical suicide when an individual mixes common household chemicals that contain a hydrochloric acid base combined with lime sulfur compound. Both products are easy to purchase at any hardware or grocery store. These incidents typically occur in vehicles, closets, bathrooms, or other small confined spaces where the concentration of gas can quickly accumulate to lethal levels.

It is recommended that the indicators provided in this guide be placed in Call Handling Guides to assist Communications personnel with recognizing a chemical suicide. A careful size-up of any situation involving an unresponsive person in an enclosed space is critical for responder safety. Size-up starts with the initial call taker and dispatcher.



EXPOSURE LEVELS

LOW EXPOSURE	0 - 10 ppm	Caller is complaining of minor irritation in eyes, nose, and throat.
MODERATE EXPOSURE	10 - 50 ppm	Caller is complaining of headache, dizziness, nausea and vomiting, coughing and difficulty breathing.
HIGH EXPOSURE	50 - 200 ppm	Caller is complaining of severe respiratory irritation, eye irritation/acute conjunctivitis. Note: This level may also cause shock and convulsions, coma and death.

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INDICATORS OF A CHEMICAL SUICIDE

Unresponsive Person in a Vehicle

When a citizen calls 911 to request medical assistance for a person that is unconscious or “sleeping” inside of a vehicle, it is important to ask questions about the scene to determine if the incident is a possible chemical suicide. It is critical that the caller and citizens stay clear from the vehicle if it meets any of the following criteria:

- Warning sign(s) taped to the vehicle door or placed inside
 - May indicate HAZMAT or SUICIDE
 - Note: not all chemical suicide cases will post warning signs*
- Smell of rotten egg or sulfur
 - The smell of rotten egg usually indicates the presence of hydrogen sulfide
 - Note: Some callers will notice the smell immediately, where others may not*
- Smell of bitter or burnt almonds
 - The smell of bitter almond usually indicates the presence of hydrogen cyanide
 - Note: Some callers will notice the smell immediately, where others may be immune*
- Unresponsive subject inside the vehicle
 - Someone committing suicide with the proper chemical mixture will be dead instantly
 - May have seatbelt fasten to prevent body from falling onto horn, alerting others
 - In several documented cases, subjects wore goggles and gloves, to prevent chemical burn before their death
- Suicide note inside vehicle
- Pennies in the vehicle or console area will be tarnished with residue

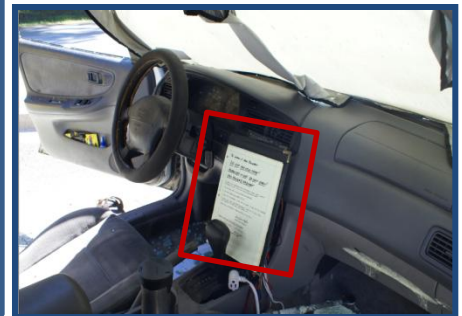


Photo Sources: St. Lucie County (FL)

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INDICATORS OF A CHEMICAL SUICIDE

Unresponsive Person in a Vehicle cont...

- Empty household cleaning containers on the floor board or seat

Note: Bonide pesticide containers commonly have purple caps and are found in many chemical suicide cases



- One or more large buckets will be visible for mixing the acid base and sulfur chemical

Note: Subjects may use the center console or glove box to mix the chemicals

- Vehicle's inside door handles removed
 - This prevents the subject from changing their mind by stopping the suicide process

- Yellow-green or white residue on the seats or on the dashboard
 - Evidence of chemical residue has been found in almost all chemical suicide cases

- Duct tape to cover air vents
 - This prevents the deadly chemical mixture from seeping out, keeping the vehicle closed

- Tools to mix the chemicals will be present

- Windows fogged or tinted with yellow/green residue

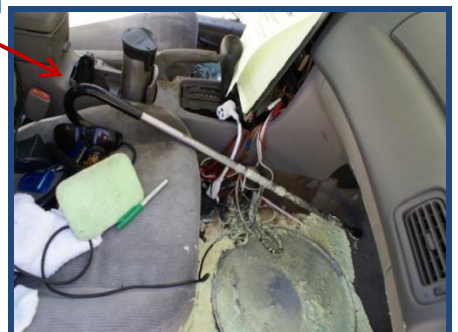


Photo Sources: St. Lucie County (FL)





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INDICATORS OF A CHEMICAL SUICIDE

Check the Well Being

Law enforcement officers have also discovered cases of chemical suicides after being dispatched to a “check the well being” call. These incidents have occurred in small confined spaces such as closets and bathrooms inside hotel rooms, college dorms and apartments. If the caller is at the location, gather information on the below indicators to recognize the potential of a chemical suicide:

- Masking tape or towels sealing a door to prevent fumes from exiting the confined area
- Smell of rotten egg or sulfur coming from the room
 - The smell of rotten egg usually indicates the presence of hydrogen sulfide
 - Note: Some callers will notice the smell immediately, where others may not*
- Smell of bitter or burnt almonds coming from the room
 - The smell of bitter almond usually indicates the presence of hydrogen cyanide
 - Note: Some callers will notice the smell immediately, where others may be immune*
- Suicide note taped to the door or mirror
- Warning sign(s) taped to the mirror or door
 - May indicate HAZMAT or SUICIDE
 - Note: Not all chemical suicide cases will post warning signs*
- Empty household cleaning containers that contain acid and sulfur
 - Note: Bonide pesticide containers commonly have purple caps and are found in many chemical suicide cases*
- One or more large buckets will be present to mix the chemicals



Photo Sources: NYS Division of Homeland Security and Emergency Services

The Central Florida Intelligence Exchange is an intelligence fusion center, dedicated to the safety and security of our emergency responders. For more information regarding this guide or chemical suicide awareness, please contact:



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- ❖ Instructional material provided by the New York State Office of Fire Prevention & Control
 - ❖ Photos provided by St. Lucie County and New York State Office of Fire Prevention & Control
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Problem: There is no longer a routine call. Recognize that every response is unique and treat as such. Always wear proper PPE and SCBA.

- First responders “unexpected” chemical exposure concern
 - Ensure that dispatch information is shared between all disciplines to enhance responder safety
 - Be alert for information indicating the potential for occupants in any enclosed space
 - First responders must utilize the proper protective equipment
- Mixing household chemicals to create toxic vapors
 - Look for and recognize containers that may indicate presence of common household chemicals
- In most cases, two (or more) chemicals will be mixed to produce vapors

Analyze the Problem

- Recognition/ID and Warning Signs
 - Open containers or a ‘mixing container’. Chemicals may not be properly marked/labeled
 - Do NOT rely on suicide notes or placards near the entry pathway for first responders which warn of danger
 - Open containers or household chemicals where they would not normally be found (vehicles, bedrooms, etc.)
 - Taping of doors, windows, dash vents, openings or other attempts to seal the enclosure
- Locations: Vehicles and Structures
 - If this is a chemical suicide remember it is a crime scene and once life safety considerations are met to treat as such
 - Look for indicators in the surrounding area and question occupants. After analysis, vehicles and structures can be ventilated. Do NOT rely on presence or lack of chemical/unusual odors. Be aware of contact with liquids or powders and provide decontamination for occupants and responders

Implement the Plan

- Handline (vapor disbursement or extinguishment)
 - Vapor Disbursement - Use water spray to reduce vapors or divert vapor cloud drift. Attempt to control and isolate runoff
 - Extinguishment - May form explosive mixtures with air. May be ignited by heat, sparks or flames
- Ventilation/Change the Environment – Properly trained and equipped first responders should ventilate after a thorough analysis of potential hazards
- Air monitoring - Should be conducted throughout the incident and until evidence has been collected and the scene rendered safe
- Victim transport – Decon prior to leaving the scene; methods will be based on occupant’s status
- Decontamination – All entry team members should undergo a technical decon according to local protocols. Beware of potential for occupants and clothing to ‘off-gas’ trapped vapors. EMS and the hospital must be notified in advance in order to avoid contamination of personnel/equipment
- Crime scene considerations – Minimize responder exposure while preserving evidence and supporting law enforcement

Evaluate

- Maintain Situational Awareness – Don’t count on warning signs. Be aware of secondary contamination

Plan the Response

- Two seconds to look into the vehicle for signs of a suicide (mixing vessels, residue, containers), ten seconds for law enforcement
- Response Options
 - Rescue/Recovery
 - Evacuation/Isolation
 - Protective handline
 - Decontamination
 - Preserve evidence
- Selection of PPE
 - Follow department policy and procedure for proper PPE and respiratory protection selection
- Obtain control of air monitoring equipment
- Selection of Decontamination
 - Occupants need to be decontaminated using a simple water shower of 3-5 minutes, following clothing removal
 - Technical decontamination should be established for entry teams conducting control tasks
- Plan of Action
 - Implement agency Hazardous Materials Response Protocols
 - Develop a site safety plan
 - Use a **Risk Based Response** control plan that is based on possible options listed above
 - Vehicle vs. Structure
 - Compartment size will/can play a role in the levels of concentration, resulting in varying levels of evacuation/shelter in place options
 - The smaller the compartment the higher the concentration -> higher toxic levels and potential to reach LEL levels
 - Ventilate all occupancies to change the concentration levels of the environment
 - Open the doors to vent and remove any occupant(s)
 - Check for signs of life prior to removal (chest movement, body movement)
 - If vehicle/structure is locked and there are no signs of life, isolate and warn others
- Evacuation vs. Shelter in place – a determination must be made of which method will be more effective in life safety

CHEMICAL PROPERTIES

Hydrogen Sulfide

Description	Colorless gas	Odor threshold	0.77 ppm
Molecular formula	H ₂ S	Odor description	Rotten egg
Molecular weight	34.08	Exposure route	Inhalation
Density	1.19 (≈ 20% heavier than air)	Signs & symptoms	Irritation of respiratory system & eyes, apnea, coma
Auto ignition temperature	260°C (500°F)	LEL/UEL	4%, 44%
Vapor pressure	15, 600 mm Hg @ 25°C (77°F)	IDLH	100 ppm
Solubility	Soluble in water, hydrocarbon solvents, ether and ethanol	Detection	PID with 10.6 eV lamp
Notes	Death by inhalation can occur quickly at low levels		

Hydrogen Cyanide

Description	Bluish-white liquid/colorless gas	Odor threshold	0.58 ppm
Molecular formula	HCN	Odor description	Bitter almond (odor may not be detected by smell)
Molecular weight	27.03	Exposure route	Inhalation, absorption
Density	0.94 (lighter than air)	Signs & symptoms	Respiration/depth change, confusion, asphyxia
Auto ignition temperature	538°C (1000°F)	LEL/UEL	5.6%, 40%
Vapor pressure	630 mm Hg @ 20°C (68°F)	IDLH	50 ppm
Solubility	Miscible in water, alcohol, slightly soluble in ether	Detection	PID with 13.6 eV lamp
Notes	Death by inhalation can occur quickly at low levels		

For more information on chemical assisted suicide response visit www.hazmatfc.com