



# GoM Region Aerosol Can Puncturing Safe Work Practice (SWP)

## 1 Purpose/Scope

The purpose of this procedure is to ensure safety during the puncturing of "industrial-use" aerosol cans (i.e., paint, degreasers, thinners, lubricants, etc.). **This procedure is not intended for puncturing aerosol cans from the crew quarters or galley (i.e., cleaning products, deodorants, disinfectants, shaving products, pesticides, etc.), which are exempt from hazardous waste regulations as "household waste". "Household" aerosol cans must be placed in the municipal trash un-punctured.**

The use of an aerosol can puncturing device is one option for disposal of industrial-use aerosol cans. An alternative to puncturing aerosol cans is to drum up aerosol cans as is (i.e., un-punctured) for disposal as a hazardous waste. Un-punctured aerosol cans cannot be considered "empty" and therefore must not be placed in the municipal trash or scrap metal bin (except as noted above).

**Note:** Aerosol cans from drilling operations are considered contractor waste and should be handled under the drilling contractor's waste plan.

## 2 Definitions

**"Empty" aerosol can** is an aerosol can that is considered "empty" only when it has been punctured and drained. "Empty" industrial-use aerosol cans must only be placed in the scrap metal bin, not the municipal trash. Note, however, that "non-empty" household-type aerosol cans are not subject to hazardous waste rules and can also be placed in the trash.

**"Household" aerosol cans** are aerosol cans from platform/rig crew quarters or galleys that are typical of items found at each of our homes that meet the definition of "Household Waste" and are exempt from EPA's hazardous waste regulations. These include personal toiletries (*shaving cream, deodorant, hair spray, etc.*) as well as cleaning supplies (*oven cleaner, Lysol, Pam, etc.*). Household-type aerosol cans do NOT have to be punctured and can be placed in with other municipal trash.

**Ignitable characteristic hazardous waste** are industrial-use aerosol can liquids that have a flashpoint less than 140°F (60°C), as indicated on the product MSDS, and must be handled as an ignitable hazardous waste.

**Industrial-use aerosol cans** are aerosol cans generated from industrial applications include chemicals used to maintain platform facilities and equipment (*lubricants, degreasers, paint, WD- 40, etc.*).

**Reactive characteristic hazardous waste** is industrial-use aerosol cans that have not been punctured would be considered a reactive hazardous waste since these cans are capable of detonation or explosion if subjected to a strong initiating source or if heated under confinement.

## 3 General Requirements

### 3.1 Aerosol Can Puncturing Equipment Specifications

The general make of aerosol puncturing devices will include:

- new 30 or 55-gallon drum (standard),
- aerosol puncturing device,
- combination filter and
- anti-static wire to properly ground drum.

The aerosol puncturing device threads into the two-inch bung of a 30 or 55-gallon drum, and the

combination filter threads into the three-quarter inch bung. With a press of the handle, a carbide-tipped puncture pin punctures the dome of the can thereby allowing the contents to drain into the receiving drum. The base of the combination filter is the coalescing cartridge. In it, the filter media coalesces microscopic liquids from the escaping propellant and forms them into droplets. The droplets collect in the reservoir of the coalescing cartridge and can be easily drained directly into the drum by opening the drain valve on the bottom. Dry propellant then moves through the activated carbon cartridge, which absorbs hydrocarbons and odor.

Manufacturers have indicated that filters will be non-hazardous waste when disposed (less than 15 wt% of volatiles).

Aerosol can puncturing devices should be purchased from a reputable vendor. **Construction of homemade devices is not acceptable.** Devices can be purchased through the following vendors;

- Katec – Virginia Beach, VA
- Aerosolv Aerosol Can Recycling System (800) 843-6808; [www.aerosolv.com](http://www.aerosolv.com) and
- McMaster-Carr Supply Company – Atlanta, GA (Account #130091400 – Fourchon) (404) 349-9700; [www.mcmaster.com](http://www.mcmaster.com).

### 3.2. Placement, Labeling, and Security of Drum

Placement, labeling, and security of the drum and puncturing device is essential to ensuring the puncturing procedure is effective in managing hazardous aerosol wastes.

#### 3.2.1 Placement

The aerosol can puncturing device and drum should be placed in a well-ventilated area away from any ignition source. In addition, the filter should be protected from weather. This may be achieved by ensuring the filter has a cover, which is maintained to prevent water penetration. Another alternative is to place the drum in a covered area of the facility that has adequate ventilation.

#### 3.2.2 Labeling

The drum with the puncturing device should be labeled to indicate what kinds of aerosols should be punctured using the device. This label can be obtained from your Waste Specialist and is important to ensure only compatible materials are collected. A "Hazardous Waste" label is also required on the drum with the start date of accumulation noted on the label. Note that drums accumulating non-punctured aerosol cans also need a "Hazardous Waste" label.

#### 3.2.3 Security

Due to the number of different chemicals located on a facility, it is recommended that the aerosol can puncturing device should be locked thereby limiting access to only authorized personnel. The locking device should have a key that is maintained by BP personnel knowledgeable of the device's proper operating procedures and the compatibility of drained liquids.

## 4 Key Responsibilities

Supervisors, designated persons, or person in charge are responsible for the safety of employees during aerosol can puncturing operations and the enforcement of this program.

## 5 Aerosol Can Puncturing Procedure (Industrial-Use Aerosol Cans Only)

## **WARNING!**

- Ⓜ Do not use on a drum less than 30-gallon capacity.
- Ⓜ Do not fill drum more than 70% full (ten inches from top).
- Ⓜ Do not operate unless three-quarter inch bung is removed and the combination filter is installed.
- Ⓜ Only collect ignitables including paints, solvents, degreasers, thinners, lubricants, etc.
- Ⓜ Do not collect caustics in drum with paints and solvents. Caustic sodium hydroxide and potassium hydroxide are ingredients in oven cleaners. They can generate heat when mixed with other substances.
- Ⓜ Do not puncture powder sprays (deodorant). They can create static and self-ignite.
- Ⓜ Do not puncture pesticides.

- a) Consult the MSDS or the onsite supervisor for an understanding of can contents.
- b) Put on the proper personal protective equipment (PPE) (goggles). (Refer to the facility PPE Assessment/Matrix).
- c) Do not operate puncturing device while smoking or near open flames.
- d) Always operate outdoors in a well-ventilated area.
- e) Ensure the anti-static wire is connected to ground drum.
- f) Ensure the activated carbon/cartridge filter is installed and functioning (free of water). Review the log of the filter change out. Filters should not be used for more than 45-120 days depending on the manufacturer. Consult the manufacturer's recommendations. Dispose of filters as non-hazardous industrial waste by placing in the "Used Filter" or "Absorbent Material" waste container at the facility.
- g) If equipped, ensure coalescing cartridge has been replaced in the last six months. If droplets have collected in the coalescing cartridge reservoir, drain directly into the drum by opening the drain valve on the bottom.
- h) Remove cap from the aerosol can and insert the aerosol can, nozzle end down, into aerosol housing sleeve.
- i) Position the sliding cover plate over the bottom of the inverted can being punctured and firmly engage against plastic sleeve.
- j) Tighten the lock nut knob.
- k) Push handle down firmly and release.
- l) Wait 20 seconds before removing punctured aerosol can to allow residual liquids to drain into drum.  
Note: When puncturing full or half full cans, best results are obtained by "pumping" the handle several times when puncturing, to moderate the evacuation pressure.
- m) After liquids are drained, loosen lock nut knob and lift can. Some residual fluid may be entrapped between the lip of the can and the holes created by the puncturing device. Tip the can to allow the residual to drain into drum.
- n) Remove punctured can from housing, lower the sliding top to rest on plastic sleeve and seal collection drum, and discard empty can in the scrap metal bin only (i.e. not the trash).

**NOTE:** Always read the manufacturer's recommendation prior to initial use of a can puncturing device.

## **6 Device Maintenance**

- The activated carbon/cartridge filter shall be replaced every 45-120 days as specified by the manufacturer.
- The Coalescing cartridge shall be replaced every six (6) months as specified by the manufacturer.
- Clean and grease the carbide-tipped puncture pin periodically (i.e., after puncturing 500 cans).

- Examine the sealing gasket on the puncture device to ensure it has not deteriorated before each use.

## 7 Key Documents, Tools, References

[GoM Waste Management Procedure for Aerosol Cans](#), Katec

– Virginia Beach, VA

Aerosolv Aerosol Can Recycling System (800)

843-6808; [www.aerosolv.com](http://www.aerosolv.com)

McMaster-Carr Supply Company – Atlanta, GA

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### Revision Log

Revision Date	Authority	Custodian	Revision Details
08/06/12	Director of Health and Safety	Health and Industrial Hygiene Team Leader	No content changes.
04/01/12	Director of Health and Safety	Health and Industrial Hygiene Team Leader	No content changes.
01/31/06	S. Garner/ S. Tink/ R. DeLeonardis/ C. Jackson	Dennis Johnson	No content changes. Revised 2 authorities. Changed CD # from 10126 to UPS-US-SW-GOM-HSE-DOC-00092-2 to conform to new naming structure in new doc base.
02/05/04	S. Garner/ B. Herbert/ R. DeLeonardis/ S. Flynn	Kathy Kanocz	Due to EPA clarification, punctured and drained cans can only be placed in scrap metal bin. Reference to placing in trash has been removed.
09/03/03	S. Garner/ B. Herbert/ R. DeLeonardis/ S. Flynn	Kathy Kanocz	Initial issue as controlled document. Prior revision history located in hard-copy consolidated manual.

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