

Alaska Department of Transportation & Public Facilities

Aerosol Can Management and Disposal



I. Purpose

This guidance is to help DOT&PF M&O facilities manage waste aerosol cans, which contain or have contained paints, solvents, and other commonly used products in accordance with federal waste regulations. Aerosol cans used in commercial or industrial settings are now included in the definition of universal waste. The EPA administers universal waste in Alaska under 40 CFR.

II. Definition

1. Aerosol can: a non-refillable receptacle containing a gas compressed, liquefied or dissolved under pressure, the sole purpose of which is to expel a liquid, mist, or foam and fitted with a self-closing release device allowing the contents to be ejected by the gas.
2. Compressed gas cylinder: a non-refillable container of compressed, liquefied, or dissolved gas that is under pressure. EPA does not consider compressed gas cylinders that are returned for re-use, refill, or re-issue as wastes or as aerosol cans.

III. Aerosol Can Storage and Disposal Options:

1. Disposal without puncturing (recommended for all classified Very Small Quantity Generator [VSQG] facilities - contact your regional environmental specialist if you do not know your classification)

1. DO NOT PLACE AEROSOL CANS IN A DUMPSTER OR TRASH RECEPTACLE!
Place spent aerosol cans in a labeled container with a lid that matches and fits the container (container must not spill cans if tipped over).
2. Store container in a protected place and keep container secured (lid must be on when not in use).
3. Mark and label the container 'Universal Waste Used Aerosol Can(s)' with the date the accumulation started (see Appendix 2 & 3 for logs).
4. Document disposal of all aerosol cans.
5. If the M&O facility is classified as a VSQG, dispose of empty aerosol cans at a local household hazardous waste facility within one year of the accumulation start date.

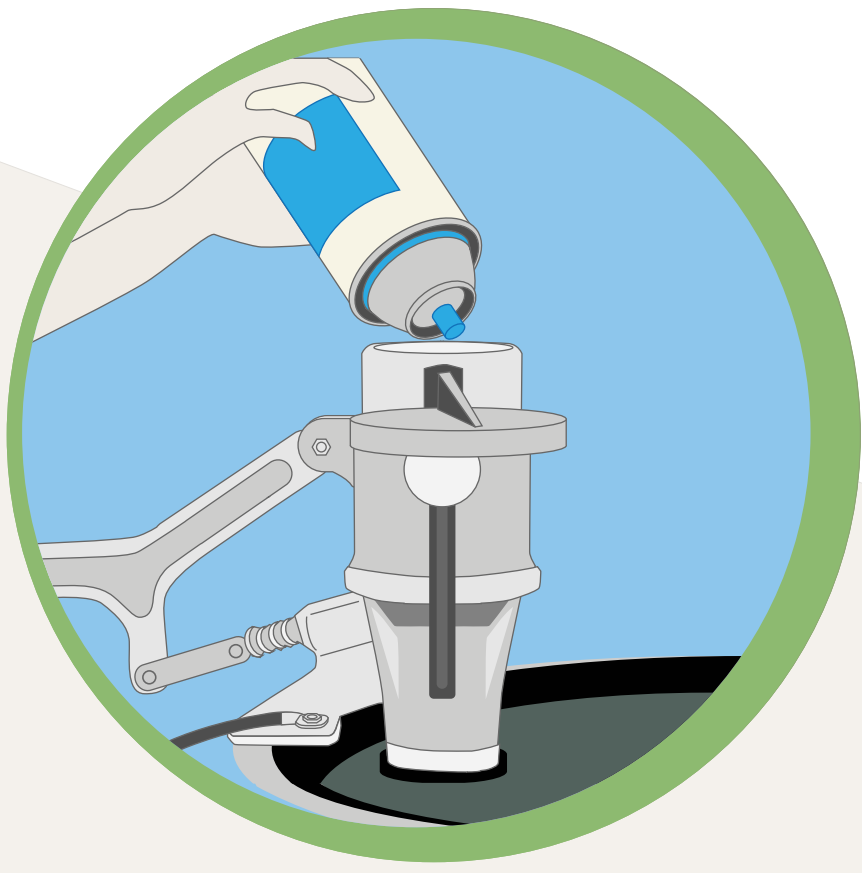
6. Other pressurized aerosol cans (i.e., pressurized air or food products) can be recycled as scrap metal, if the facility has a local program, or thrown away.
7. Store empty pressurized gas cylinder tanks in a bin, box, or other suitable container that is used exclusively for waste cylinders. This type of tank includes LPG (propane) that are not regulated as a universal waste. Consult with your regional environmental specialist for additional cylinder tank disposal.

2. Disposal via puncturing

1. This process is to make an aerosol can “RCRA empty.” The facility must remove all of the liquid that can be removed by normal means (i.e., by puncturing the can) and have no more than one inch or 3% by weight of residue remaining in the can. (See Appendix 1 for puncturing directions)
2. Use an approved puncturing device to safely drain the remaining contents of each aerosol can into a hazardous waste container. Puncture and drain on-site. Immediately transfer the contents from the waste aerosol can or puncturing device into a metal closed collection drum.
3. The puncturing device must be situated on a solid, flat surface and in a well-ventilated area.
4. Do not use any puncturing method that releases gases or liquids directly into the environment. This is considered a non-compliance. Use an approved commercial device specifically designed to safely puncture cans and contain all residuals and emissions. Most devices need carbon filter replacement after 45-60 days or 1,200 spent aerosol cans. Consult with your regional environmental specialist on device selection and maintenance.
5. A log must be kept listing what chemicals are being placed in the drum for a waste handler to accept the co-mingled residuals, therefore avoiding the expense of profiling the drum.
6. Document the number of cans recycled at the local recycling facility or disposed of at the local landfill.
7. Store depressurized aerosol cans in labeled container with a fastened lid in a secure place.
8. Hazardous Waste Determinations:
 - i. If puncturing empty aerosol cans, the contents collected in the drainage collection container must be correctly characterized. Update the Aerosol Can Disposal Log (Appendix 2 or 3) each time a can is punctured. The log is the basis for the determination of the contents of the drum.
 - ii. If a can that is punctured is not empty and the contents are a listed waste, the waste must be characterized as the listed waste, because the solvent was not spent. For this reason, carefully document any non-empty cans that are punctured.

Appendix 1. Aerosol directions for puncturing cans.

USING THE AEROSOLV SYSTEM:



1 INSERT AEROSOL CAN

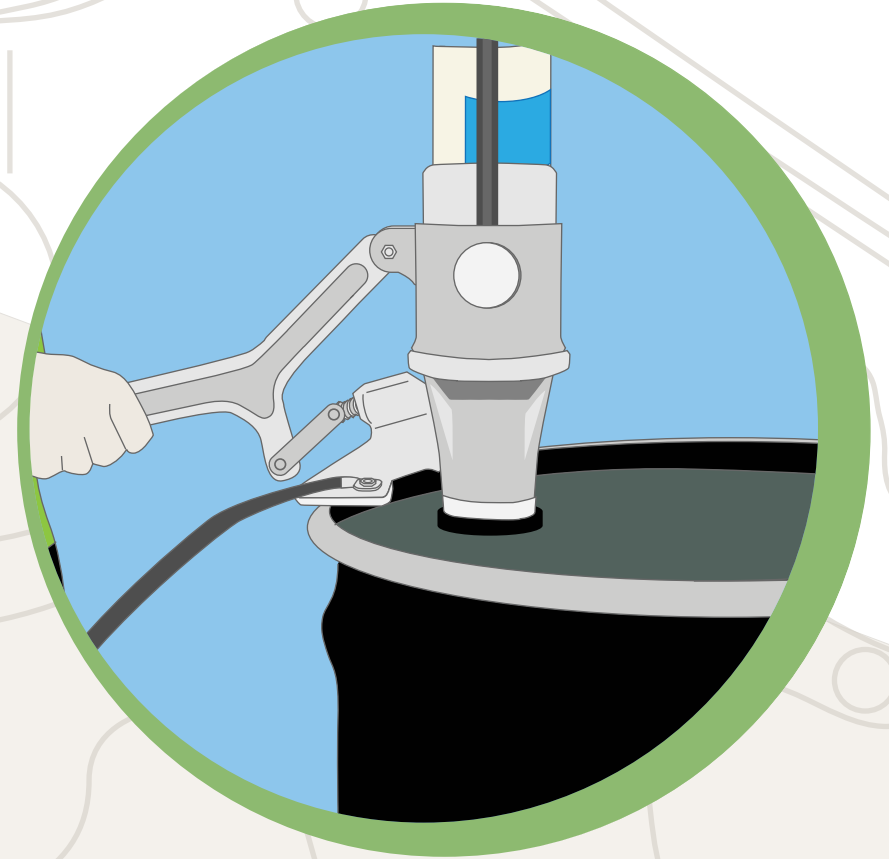
Insert aerosol can, NOZZLE END DOWN, into housing sleeve, so that shoulder of can rests on gasket. For 1" "mini-cans", push shoulder of can beyond gasket. Be sure to remove cap from aerosol can prior to insertion.

When puncturing "jumbo" cans, remove white plastic sleeve from housing, then insert can as pictured.



2 LOWER TOP PLATE

Lower the sliding top plate and FIRMLY engage against plastic sleeve or bottom of "jumbo" can. TIGHTEN lock knob.



3 PUSH HANDLE DOWN

Push handle down firmly until completely depressed and HOLD IN PLACE while can releases initial pressure and contents. Allow the contents of the can to drain into the collection drum (about 20 seconds).

For safety, after removing the last punctured can, lower sliding top to rest on plastic sleeve and tighten lock knob to seal collection drum. For "jumbo" cans, replace plastic sleeve prior to lowering sliding top plate.

OPERATION

Always operate outdoors or in a well ventilated area.



WEAR SAFETY GOGGLES WHILE OPERATING AEROSOLV.



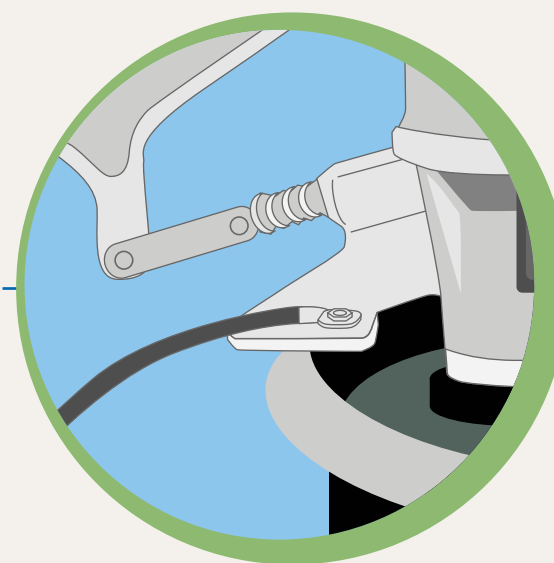
PUNCTURING UNIT

Thread into 2" bung, rotate clock wise until ground support plate firmly engages drum rim.



FILTER

Thread directly to 3/4" bung of drum.



ANTI-STATIC WIRE

Attach ring terminal of Anti-Static Wire to brass screw on Ground Support Plate of Puncturing Unit.

Attach other end of Anti-Static Wire to any nearby confirmed ground source, ex. metal pipe.

*OSHA requires that liquid storage vessels be grounded to prevent static.

MAINTENANCE TIPS:

PUNCTURING UNIT

- Periodic cleaning and lubrication of the puncture pin will assure years of trouble-free use. With constant, heavy usage, the puncture pin should be cleaned and lubricated once a month.

To clean or replace puncture pin, remove bridge pin at uppermost point of handle. Entire handle mechanism and puncture pin can be removed.

- Gasket deterioration will occur when venting aerosol paints and aggressive solvents, requiring periodic gasket replacement. To assure proper seal during usage, check gaskets frequently and replace as required.

To replace gasket: remove plastic sleeve, pull out old gasket, fold and insert newgasket, press into place.

FILTER

- Replace Activated Carbon Cartridge after every 750 cans punctured. Remove spent Activated Cartridge by turning counter-clockwise while holding lower Coalescing Cartridge in place.
- Replace entire filter every 9 months or after puncturing 2250 spent aerosol cans.

INSTALLATION



The first and only aerosol can recycling technology to be verified by the joint U.S. EPA and California EPA Environmental Technology Verification program (ETV).

*This is a quick-start guide and does not replace operations manual. Please refer to operations manual for detailed instructions and further information.

RMP5134 Rev- ©2016 Aerosolv Incorporated

CONSERVATION

With Aerosolv, conserve dollars while saving precious landfill space.

- Solid waste disposal of aerosol cans averages \$5/can.
- Fines for improper disposal can reach \$25,000.
- The cost of Aerosolv is recouped after puncturing as few as 100 cans.

#28202 Aerosolv Can Recycling System includes:

- Puncturing unit with separate plastic sleeve
- Anti-static wire
- Coalescing carbon filter
- Safety goggles

REPLACEMENT ACCESORIES FOR #28202



#28224

Combination coalescing/carbon filter



#28223

Carbon cartridges (2 pk)



#28200

Maintenance Repair Kit: includes puncture pin with o-rings, aeroprene gasket, bridge pins, spring and tube of grease



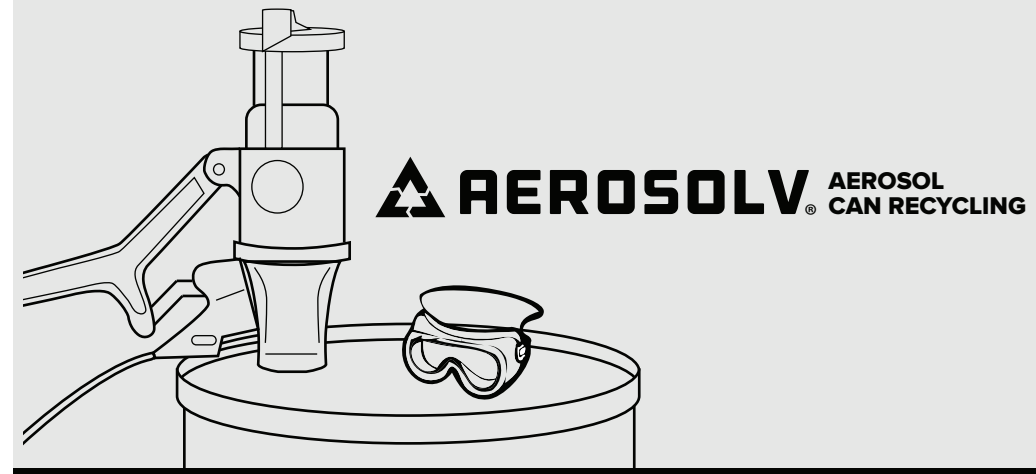
#28111

Aeroprene Gasket



Justrite
justrite.com

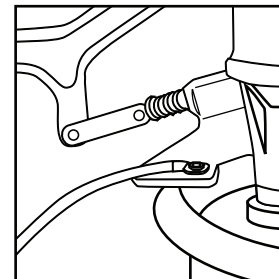
800-798-9250



SAFETY INSTRUCTIONS

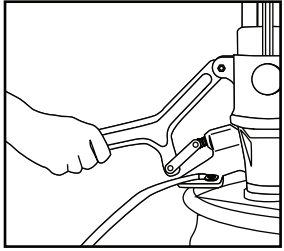
1. Wear safety goggles while operating Aerosolv.
2. DO NOT use Aerosolv while smoking or near open flame.
3. Install Anti-Static Wire to properly "ground" drum.
4. Combination Filter MUST be installed prior to using Aerosolv, Replace Carbon Cartridge as indicated.
5. DO NOT use Aerosolv on a drum with less than 20-gallon capacity.
6. Remove Aerosolv to an empty drum once collection drum is 70% full (when contents reach within 10" of the top).
7. Always engage sliding top plate against can being punctured.
8. Always operate AEROSOLV system outdoors or in a well-ventilated area.
9. **Tip:** Avoid puncturing aerosol cans of cold galvanizing compound or insulation foam, unless can is empty.

AEROSOLV® INSTALLATION



- **Aerosolv Unit:** Thread Aerosolv into 2" bung of drum, Rotate clockwise until ground support plate firmly engages drum rim. See lower right side of photo.
- **Filter:** Thread directly to 3/4" bung of drum.
- **Anti-Static Ground Wire:** Attach ring terminal of Anti-Static Wire to brass screw on Aerosolv Ground Support Plate
- Attach alligator clip of Anti-Static Wire to any nearby confirmed ground source, ex: metal pipe.

USING AEROSOLV®

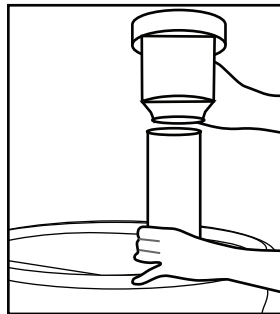


- Wear safety goggles while operating Aerosolv
- Insert aerosol can, NOZZLE END DOWN, into Aerosolv housing sleeve, so that shoulder of can rests on gasket. For 1" "mini-cans", push shoulder of can beyond gasket. Be sure to remove cap from aerosol can prior to insertion.
- When puncturing "jumbo" cans, remove white plastic sleeve from Aerosolv housing, then insert can as above.

- Lower sliding top plate and FIRMLY engage against plastic sleeve or bottom of "jumbo" can. TIGHTEN lock knob.
- Push handle down firmly until completely depressed and hold in place while can releases initial pressure. Slowly raise the handle and immediately depress, this will control the rate of pressure and content evacuation from the aerosol can. In order to prevent back pressure, allow the contents of the can to drain into the collection drum (about 20 seconds).
- After removing punctured can, lower sliding top to rest on plastic sleeve to seal collection drum. For "jumbo" cans, replace plastic sleeve prior to lowering sliding top plate.

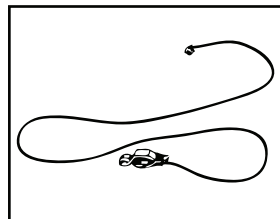
AEROSOLV® FILTER

- Replace Activated Carbon Cartridge (upper portion) every 3 months or 750 cans; more frequent change-outs may be necessary based on use. Remove spent Activated Carbon Cartridge by turning counter-clockwise while holding in place Coalescing Cartridge (bottom portion). Replacement of the Activated Carbon Cartridge will prolong the life of the entire Combination Filter.
- Replace the entire Combination Filter every 9 months, 2250 cans, or after the Activated Carbon Cartridge (upper portion) is changed-out twice. To replace simply order a Combination Filter, which includes the Coalescing Cartridge and the Activated Carbon Cartridge.



AEROSOLV® ANTI-STATIC WIRE

OSHA requires that liquid storage vessels be grounded to prevent static electricity build-up. The Aerosolv System includes an Anti-Static Wire for user convenience.



AEROSOLV® MAINTENANCE

Periodic cleaning and greasing of the puncture pin will assure years of use. With constant, heavy usage, the puncture pin should be cleaned and greased once a month.

- To clean or replace puncture pin, remove bridge pin at uppermost point of handle. Entire handle mechanism and puncture pin can be removed.

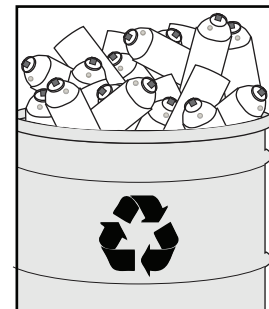
Gasket deterioration will occur when venting aerosol paints and aggressive solvents, requiring periodic gasket replacement. To assure proper seal during Aerosolv usage, check gaskets frequently and replace as required.

- To replace gasket, remove white plastic sleeve from Aerosolv housing, then simply pull out old gasket and snap in replacement.

COMPLIANCE

- *By bringing the propellant to atmospheric pressure, Aerosolv achieves compliance with:*
 - › 40 CFR 261.7(b)(1)
 - › 40 CFR 261.7(b)(1)(B)(2)
 - › 40 CFR 261.23(a)(6)
- *Once relieved of pressure, aerosol cans are not regulated waste (OSWER Directive 9432.01 (80)). In addition, puncturing aerosol cans to achieve atmospheric pressure is not considered "treatment"; therefore, permitting is not required.*

RECYCLING



- Recycling 8,000 aerosol cans reduces solid waste and increases recycling by one-ton.
- By installing Aerosolv systems on two drums, non-chlorinated aerosols can be collected separately, then reclaimed as solvents, resulting in waste minimization credit.
- Cans punctured using Aerosolv may be recycled with other scrap steel.

Aerosolv leaves only a smooth edged hole.

