



## SAFETY / ENVIRONMENTAL TOOLBOX TRAINING – PROPER MANAGEMENT OF AEROSOLS

### SUPERVISOR INSTRUCTIONS:

- Use toolbox trainings to encourage safety / environmental discussions during monthly meetings with employees
- Submit the employee sign-in sheet to your designated administrative assistant /training coordinator as a record of training



Aerosol spray cans are found everywhere, even in your home. They come in many shapes and sizes, from spray paint, to oven cleaners, cooking sprays, and even medical inhalers. Aerosols are not typically thought of as chemical waste, but they are, even when empty! There are both Safety and Environmental concerns when handling spray cans. Just because you can dispose of an aerosol spray can at home, does not mean that is an acceptable practice here at Emory.

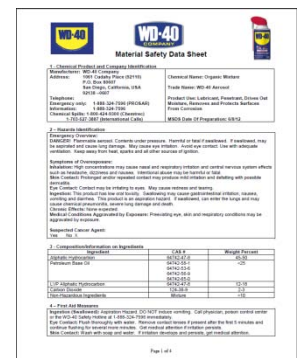
Environmental and Safety Inspections are conducted by Emory’s Environmental Health and Safety Office. Proper waste disposal practices are audited as a part of these inspections to ensure that Emory is in compliance with environmental regulations and that Emory is audit ready in the event we are inspected by the United States Environmental Protection Agency (EPA) or the Georgia Environmental Protection Division (GA EPD).

### Safe Handling

Aerosol spray cans are used daily as a part of supporting Emory’s day to day business operations. These spray cans contain a chemical under pressure. This includes “canned air” which isn’t really air, but a gas such as difluoroethane. Follow these basic safety precautions when storing or using aerosols:

- Refer to the Material Safety Data Sheet (MSDS) and use appropriate Personal Protective Equipment (PPE) for your specific product prior to use

The MSDS will provide some safe handling information such as ingredients, handling and storage, and PPE recommendations.



## SAFETY/ENVIRONMENTAL TOOLBOX TRAINING –PROPER MANAGEMENT OF AEROSOLS

---

- Keep away from open flames, heat, or other ignition sources

The propellant or the chemical itself could be flammable and when used, may ignite if there is an ignition source nearby. Despite what you may have seen on MythBusters, exposure to heat such as the inside of a car on a sunny day could increase the pressure of the can, causing it to burst. Temperatures inside a vehicle can quickly reach 100°F in just a few minutes on an average day in Georgia, and easily exceed 130°F. If the aerosol is being used near an ignition source, the chemicals could ignite

- Store in a cool, dry location, away from drains

Moisture can compromise the integrity of the metal, causing it to rust. This weakens the metal and may cause the container to rupture due to the pressure. If aerosols are stored near a drain, they must be kept in a secondary container to prevent the chemical from reaching the drain should the aerosol can develop a leak.



- Do not pierce or puncture cans

Puncturing a can is dangerous and can release harmful chemicals into the atmosphere in addition to the pressure that would be released.

- Do not use in confined spaces and use caution when using in a poorly ventilated area

Vapors generated from using an aerosol spray may quickly become concentrated in an area with poor ventilation. If possible, restrict aerosol usage, increase ventilation in these areas, evaluate spray techniques (e.g. short quick sprays versus a long continuous spray), and identify product substitutions that would be less volatile.

## SAFETY/ENVIRONMENTAL TOOLBOX TRAINING –PROPER MANAGEMENT OF AEROSOLS

### Disposal

Aerosols being used in support of Emory's business may be transported in a vehicle by non-EHSO personnel. Aerosols should be brought back to your central office or shop to be evaluated for further use. Once it is determined that the aerosol is unwanted or a waste, it may only be transported by trained EHSO personnel who will handle the disposal and recycling of the material. EHSO can provide containers to collect waste aerosols at your facility.

Aerosol spray cans must never be disposed in the general trash!

All unwanted and waste aerosols, whether they are full or empty, must come to EHSO for disposal by emailing a collection request to [chemwaste@emory.edu](mailto:chemwaste@emory.edu). Include the following in your request:

- The approximate quantity or volume for disposal
- Location of the aerosols
- Quantity and size of replacement containers, if needed

Complete a Chemical Disposal Inventory form located under the "Waste" link at [www.ehso.emory.edu](http://www.ehso.emory.edu) and have it ready with the aerosols for disposal. EHSO will schedule a time to collect the waste aerosols directly from your location.

### Emergency Response Procedures

If there are injuries, contact 911 immediately.

If there are no injuries:

- Limit access to the area
- Contain the spill if possible
- Do not attempt cleanup unless you are trained to do so

If you need assistance, notify your supervisor and contact EHSO at 404-727-5922

If it is after normal business hours, contact Emory Police at 911 from a campus phone or 404-727-6111

## SAFETY/ENVIRONMENTAL TOOLBOX TRAINING –PROPER MANAGEMENT OF AEROSOLS

---

### Questions for Discussion

1. May a clogged or empty aerosol can be thrown in the dumpster? Why or why not?

**Answer:** No, because the aerosol can is still pressurized, and may still contain a harmful chemical whether it is full or empty. Email EHSO at [chemwaste@emory.edu](mailto:chemwaste@emory.edu) to dispose of your aerosols.

2. True or False: An aerosol can may be stored in a vehicle. Justify your answer.

**Answer:** False. The temperature in a vehicle can easily exceed 100°F. This will increase the pressure of the can which may lead to the can exploding or rupturing.

3. Can you identify areas of poor ventilation where aerosol sprays are used in your work location? If so, discuss how to increase ventilation, spray techniques that could reduce vapors, and if there is another less volatile product that could be substituted.

4. An aerosol can was left inside a vehicle on a hot day. The temperature inside the car was over 130°F. You open the door to the vehicle and discover that the aerosol can burst leaving the contents of the can all over the inside of the vehicle. This was during normal business hours, but no one was present at the time the can burst, so there are no injuries. What should you do?

**Answer:** Restrict access to the vehicle until the chemical can be cleaned up. If possible, contain the spill to prevent it from spreading. If you are trained to work with the chemical that has been spilled, you may clean the spill yourself and contact EHSO to dispose of the contaminated debris used to clean the spill. If you are not trained to clean the spill, notify your supervisor and contact EHSO for further assistance.