

# Rags and Absorbents Disposal

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## University of Tennessee Safety Guide EC-023

**Document Contact:** EHS-Environmental Compliance

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### Purpose

The purpose of this guideline is to ensure that various absorbent materials are properly managed and disposed on campus.

### Scope and Applicability

This guideline shall apply to all places of employment on the UTK campus where students, staff and faculty are generating waste rags and absorbents for disposal. This shall apply to any absorbent materials, such as kitty litter or vermiculite, pigs, rags, towels, etc. to clean up spills and leaks of oils, grease, solvents, etc.

### Abbreviations and Definitions

#### Abbreviations

**CF:** Code of Federal Regulations

**DOT:** Department of Transportation

**EHS:** Environmental Health and Safety

**EPA:** Environmental Protection Agency

**LDR:** Land Disposal Restrictions

**PCB:** Polychlorinated Biphenyls

**SDS:** Safety Data Sheets

**TDEC:** Tennessee Department of Environment and Conservation

**TSCA:** Toxic Substances Control Act

#### Definitions

**Hazardous substance** – Any substance that is capable of causing an acute or chronic health condition in humans or adversely impacting the environment. Substances that are considered physical hazards (flammable substances, explosives, shock sensitive, etc.) are included in the definition of a hazardous substance.

**Safety data sheet (SDS)**- Detailed information bulletin prepared by the manufacturer or importer of a chemical that describes the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first aid procedures, and control measures.

## Roles and Responsibilities

### Employees shall:

- i. Ensure that oily rags and absorbents are being handled properly according to all applicable federal, state and local regulations.
- ii. Ensure they are properly trained to manage absorbent waste.
- iii. Confer with their supervisor and/or EHS if they have any questions about how to manage their absorbent waste.
- iv. Minimize the volumes of waste absorbents that are generated during processes.

### Managers and Supervisors

who have employees who use or generate rags and absorbents containing hazardous substances under their control shall:

- i. Ensure their employees are trained in how to properly manage waste rags and absorbents.
- ii. Review waste minimization efforts to decrease the volume of waste absorbents generated by their employees.

### EHS shall:

- i. Serve as a technical resource to help make determinations whether rags and absorbents being generated are hazardous or non-hazardous waste, and how to manage and minimize the volumes of absorbents generated.
- ii. Coordinate the disposal of hazardous rags and absorbents following all applicable regulatory requirements.
- iii. Provide training to employees on managing waste absorbents upon request.
- iv. Revise absorbent guidelines as needed.

## Guidance

This guideline covers absorbent materials, such as kitty litter or vermiculite, pigs, rags, towels, etc. to clean up oils, grease, solvents, etc.

Some areas on campus use shop towels, rags and wipes to clean up spills. If the shop towels are reused and laundered, then the towels do not need to be managed as hazardous waste and disposed. If a laundry service is used, please make sure that the shop towels are free of liquids before laundering. However, if the shop towels containing oil, solvents, or other potentially hazardous substances are disposable, then steps need to be taken to ensure this waste is properly being managed. The first step is identifying if the absorbents are hazardous or non-hazardous waste.

### **Rags, Shop, Towels and Absorbents contaminated with oil and grease (including cooking oil):**

Rags, towels and absorbents contaminated with oil and grease are not considered hazardous waste, unless they are contaminated with a listed solvent (see Table 1 below). If small quantities of oily shop towels or absorbents are generated, then these can be discarded in the municipal trash. However, if waste oily rags and absorbents are generated on a regular basis, then a waste collection container needs to be set up in the work area. The container should be lined with a compatible liner (such as a clear plastic bag), properly labeled as oily rags, and closed when not in use. Even though absorbents contaminated with oil are not classified as hazardous waste, they still need to be managed properly, according to EPA's used oil regulations found in 40 CFR Part 279. EHS can be contacted to help set up a collection container and advise on properly managing and disposing this

waste. There are several options for waste disposal. EHS can be contacted for guidance and questions. This guideline covers both maintenance shops, as well as kitchens on campus which could generate absorbent waste from cooking oil and grease. If an oil spill is large (more than one gallon), or enters a storm drain, please contact EHS at 974-5084 and/or the fire department and evacuate the area. The spill should be contained as soon as possible. There are various locations on campus where spill kits are stored for use in the event of a spill.

### **Absorbents contaminated with Listed and Characteristic Solvents:**

Absorbents contaminated with the following F-listed solvents listed in Table 1 are classified as hazardous waste and must be managed according to all RCRA regulations. These must be stored in a closed container when not in use and properly labeled as hazardous waste with a UT hazardous waste label. Once the container is filled, EHS should be contacted to dispose of the hazardous absorbent waste. If you are unsure if the solvent being used contains an F- listed solvent, then start by reviewing the SDS sheet. If you are still unsure, please contact EHS for guidance.

#### **Table 1: F-Listed Solvents:**

- acetone
- benzene
- n-butyl alcohol
- carbon disulfide
- carbon tetrachloride
- chlorinated fluorocarbons
- chlorobenzene
- cresols and cresylic acid
- cyclohexanone
- o-dichlorobenzene
- 2-ethoxyethanol
- ethyl acetate
- ethyl benzene
- ethyl ether
- isobutanol
- methanol
- methyl ethyl ketone
- methyl isobutyl ketone
- methylene chloride
- nitrobenzene
- 2-nitropropane
- pyridine
- tetrachloroethylene
- toluene
- 1,1,1-trichloroethane
- 1,1,2-trichloroethane
- trichloroethylene
- trichlorofluoromethane
- 1,1,2-trichloro-1,2,2-trifluoroethane

- xylene

Absorbents that have been used to clean up spills of “characteristic” hazardous waste (flammable solvents such as gasoline; corrosive liquids) are not classified as hazardous waste if they are not contaminated with listed solvents (see list above). Characteristic waste includes four major categories: corrosives, flammables, reactive and toxic waste. Also, if a de minimus spill of hazardous waste occurs (meaning an insignificant non-routine release), the absorbents used to clean up the spill may not be considered hazardous waste, unless the release involves an acute compound (40 CFR 261.33(e)), which is found in the list of acutely toxic compounds found at [www.ehs.utk.edu](http://www.ehs.utk.edu). However, absorbents used to clean up characteristic hazardous waste must be treated as hazardous if they are saturated (which means liquid can be squeezed from the rags), or if there are any free liquids at the bottom of the waste container. If you are not sure, please contact EHS to make sure the waste absorbents are being properly managed. When storing absorbents, make sure you do not pour any excess liquids (i.e. oil) into the collection container and do not allow absorbents containing hazardous waste to air-dry. Any free liquids generated should be managed as a separate hazardous waste stream. Make sure they are stored in a closed, properly labeled container. If the absorbents contain flammable solvents, the containers should be sufficiently separated from all external sources of ignition and “No Smoking” signs must be legible and placed in all accumulation areas.

### **Cutting Oil and Fluids:**

There is a possibility that absorbents used to clean up cutting oils and fluids contain halogenated compounds, or other solvents, such as acetone and toluene, that are classified as listed waste. Also, it is important to review the processes the cutting oil is involved in, because there might be some other factors, such as metal shavings, that could cause the absorbents to become hazardous waste. For example, there could be metal shavings present containing lead, chromium, etc that are managed as hazardous waste by RCRA. In those cases, those absorbents should be managed as hazardous waste. If unsure of what types of compounds are present in the cutting oil review the SDS sheet to make a determination. If still unsure, please contact EHS for assistance.

### **Absorbents Contaminated with PCB oil:**

Rags used to clean up spills involving PCB Liquids (>50 ppm) are not defined as hazardous waste under RCRA. However, they should be managed according to TSCA regulations. They should be placed in a container and labeled with a PCB marking. The out of service date (which is the date the spill was cleaned up), should be written on the outside of the container. If a PCB liquid spill is cleaned up, please contact EHS as soon as possible to provide assistance in properly managing this waste.

### **Best Management Practices for Managing Rags and Absorbents:**

- Make sure to keep lids closed on containers with absorbents to prevent spills or evaporation.
- Substitute non-hazardous chemicals whenever possible, instead of using hazardous solvents.
- Repair leaks as soon as possible, and use drip pans and draining pans to prevent spills.
- Explore other methods of cleaning up spills, including brushing, vacuuming and dry wiping.
- Use funnels when pouring used oil or solvents into waste drums to reduce the chance of spills.
- Use a reusable absorbent pad to clean out sumps and oil/water separators, and carefully wring it out completely before reusing it.
- Do not mix absorbents used for hazardous spill cleanup to clean up non-hazardous spills. Mixing of the two could result in the entire mixture becoming hazardous.
- Make sure that absorbents containing incompatible materials are stored separately (i.e. acids and bases, flammables and oxidizers).

## Recordkeeping

Safety data sheets should be maintained indefinitely.

The department is responsible for maintaining any training the employee received concerning used oil and hazardous waste management.

All manifests, bills of lading, LDRs, or any other paperwork dealing with hazardous waste shipment and disposal must be kept a minimum of three years from the shipment date.

## Training and Information

People who generate used oily rags should take Used Oil Management training. This can be offered by request from EHS. In addition, anyone who generates rags and absorbents containing hazardous materials should take Hazardous Waste Management training. Please contact the Training Coordinator in EHS at 974-5084 for more information.

## References

EPA: 40 CFR 260, 261, 262, 268, 279

TDEC: 1200-01-11

TSCA: 40 CFR 700-766

## Disclaimer

The information provided in these guidelines is designed for educational use only and is not a substitute for specific training or experience.

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