

# The FACTS

## Hazardous Materials



OCCUPATIONAL AND ENVIRONMENTAL SAFETY

A **hazardous material** is any biological, chemical, or radioactive material with properties that make it dangerous or potentially harmful to human health or the environment.

Always use required PPE when handling hazardous materials. Refer to Safety Data Sheets & Chemical SOPs/SASPs for PPE information.



### Friendly Reminders

- ❖ Personnel should ensure that stock chemicals and other hazardous materials are stored properly to prevent spills, uncontrolled reactions and minimize worker exposures.
- ❖ A chemical inventory consisting of names, storage locations, quantities and hazards should be prepared and maintained using SciShield's ChemTracker, see the link below for more information.

<https://media.clemson.edu/research/oes/indushtygiene/Fact%20Sheets/SciShield/Quick%20Tips%20and%20Chemical%20Inventories%20on%20SciShield.pdf>

### Storage Guidelines

**Hazardous Materials storage inside labs should be limited to those materials and quantities necessary to complete task requirements.**

### Storage Dos:

- ❖ Segregate according to hazard class & compatibility (i.e. acids from bases; oxidizers from organics /flammables; cyanides from acids).
- ❖ Must be labeled in accordance with the OSHA Laboratory Standard.
- ❖ Highly toxic chemicals must be stored separately from all other chemicals & in closed cabinets. Cabinets must be labeled "Toxic Chemicals" or with similar warnings.
- ❖ Use secondary containment, such as acid carriers, when transporting liquid chemicals more than a very short distance.
- ❖ Flammable requirements & combustible materials must be stored in accordance with NFPA 45 & NFPA 30.
- ❖ Must be closed when not in use.
- ❖ Must be maintained per manufacturer.

**SAFE CYLINDER STORAGE & HANDLING**

1. **SECURE** cylinders properly at all times.
2. **STORE** cylinders in a cool, well-ventilated, fire-resistant area in compliance with federal, state and local regulations.
3. **LOCATE** cylinders where they will not be pushed over or damaged by falling objects.
4. **CLOSE** valves and **TIGHTEN** caps when not in use.
5. **INSPECT** cylinders for leaks and check brackets regularly for structural durability.
6. **TRANSPORT** cylinders using hand trucks designed for this purpose.
7. **REPORT** any leaks or damage to your supervisor immediately.

**IN CASE OF AN EMERGENCY:**

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### Storage Don'ts:

Hazardous Materials must not be stored:

- ✦ On Floors
- ✦ Under Sinks
- ✦ In Chemical Fume Hoods
- ✦ On Benches without lips or restraining device
- ✦ Liquid Above Eye Level



### Other Resources

OES Website:

<https://www.clemson.edu/finops/oes/index.html>

Lab Safety Website:

<https://www.clemson.edu/finops/oes/researchsafety/labafety/index.html>

Hazardous Materials Website:

<https://www.clemson.edu/finops/oes/hazmaterials/index.html>