

HANDLING AND STORING HAZARDOUS MATERIALS

Hazardous materials are found in many homes, businesses, schools and other facilities. They do not have to be part of a facility's primary function to create a serious fire, chemical or life-safety hazard.

The **City of Milwaukee Department of Neighborhood Services (DNS)** provides this information to help residents, businesses, schools and property managers understand the importance of properly **handling and storing hazardous materials**.



DNS conducts **annual or biannual fire inspections of businesses, schools and certain residential properties and other facilities**. As part of these inspections, DNS inspectors may evaluate how hazardous materials are stored and handled, including their location, quantity, labeling, containers, and proximity to ignition sources or incompatible materials.

An inspection represents conditions observed at the time of the inspection. Conditions can change after an inspection, which is why facilities should maintain safe storage and handling practices at all times. If production or use of hazardous materials is not the primary function of your operation, this information can help prevent a dangerous incident. Hazardous materials are not limited to laboratories or industrial facilities. They can be found anywhere cleaning, maintenance, construction, food service, landscaping, pool maintenance or other everyday activities take place.

The guidance in this information sheet is informed by nationally recognized fire and building safety practices, including those developed by the **International Code Council (ICC)** and the **National Fire Protection Association (NFPA)**. Specific requirements may vary based on the material, quantity, building, and storage location.

What are hazardous materials?

- Flammable or combustible
- Corrosive
- Toxic
- Reactive
- Oxidizing
- Capable of releasing hazardous vapors or gases
- Common examples include:
 - Cleaning products and disinfectants
 - Solvents and degreasers
 - Aerosol products
 - Fuels and oils
 - Pool and water-treatment chemicals
 - Paints and coatings
 - Maintenance chemicals
 - Compressed gases
 - Certain laboratory chemicals

A product being commonly used does **not** mean it can be stored anywhere or in any quantity.

Consider Storage

Improper storage of hazardous materials can contribute to fires, chemical reactions, toxic exposures and property damage.

Hazardous materials should be stored in locations appropriate for the material and in accordance with applicable code requirements and the manufacturer's instructions.

Keep materials away from ignition sources. Do not store flammable or combustible materials near:

- Furnaces and boilers
- Water heaters
- Electrical equipment
- Open flames
- Hot surfaces
- Other sources of heat or ignition
- Keep incompatible materials separated

Some chemicals can react dangerously when they come into contact with one another.

Do not store incompatible materials together simply because they are all cleaning or maintenance products. Follow the manufacturer's storage instructions and Safety Data Sheet (SDS) for information about chemical incompatibilities.

Store materials in appropriate containers. Whenever possible, keep products in their original containers. Containers should:

- Remain properly labeled
- Be closed when not in use
- Be maintained in good condition
- Be stored in accordance with the manufacturer's instructions
- Do not transfer a hazardous material into an unlabeled container.
- Pay attention to quantity

The amount of hazardous material stored in a building can affect the fire and building-code requirements that apply.

Avoid accumulating more hazardous material than is reasonably necessary. Larger quantities may require additional safeguards, separation, storage arrangements or other protections.

Facility managers should know **what materials are present, where they are stored, how much is stored, and whether the storage location is appropriate for those materials.**

Cleaning products should not be assumed to be harmless simply because they are routinely used. A small amount can still create a serious hazard

A custodial closet, restaurant cleaning-supply room, contractor's storage area, maintenance room or homeowner's garage may contain products capable of burning, reacting with other materials or releasing hazardous vapors.

The risk depends on the **characteristics of the material, how it is stored, what is stored around it, and the quantity present.**

Before storing a product, ask:

What is it?

Know the hazards associated with the product before storing it.

How much do we have?

Quantity can affect applicable fire and building-code requirements.

Where are we storing it?

Make sure the location is appropriate for the material. Keep hazardous materials away from heat, flames and other ignition sources and separate incompatible materials.

Is it properly labeled and contained?

Keep products in their original containers whenever possible. Containers should be properly labeled, closed and in good condition. If a material is transferred to another container, the new container should be appropriately labeled. Proper labeling helps employees, occupants, inspectors, and emergency responders quickly identify potential hazards and take appropriate precautions.

What does the Safety Data Sheet say?

Review the product label and SDS for information about storage, incompatibilities, ventilation, temperature, and emergency response.

Are we storing more than we need?

Avoid unnecessary accumulation of hazardous materials.

Don't assume "cleaning product" means "safe"

Many cleaning and maintenance products contain ingredients that may be **flammable, combustible, corrosive, toxic, or reactive.**

Before purchasing or storing a product, review its label and Safety Data Sheet (SDS). Pay particular attention to warnings about:

- Flammability
- Heat and ignition sources
- Ventilation
- Incompatible chemicals
- Storage temperature
- Spill and leak response
- Required protective equipment

Never mix cleaning chemicals unless the manufacturer's instructions specifically permit it. Certain combinations of cleaning products can produce toxic gases or dangerous chemical reactions.

Handling hazardous materials

- Proper handling is just as important as proper storage. People who handle hazardous materials should:
- Understand the hazards of the product
- Follow the manufacturer's instructions
- Use required personal protective equipment
- Keep containers closed when not in use
- Prevent spills and leaks
- Know what to do if a spill, leak or fire occurs
- Keep unauthorized individuals away from hazardous materials

Proper storage and disposal of contaminated materials: Materials contaminated with flammable or combustible liquids, oils, solvents, or other hazardous chemicals should be stored in approved, self-closing metal waste containers when required and kept away from ignition sources. These materials should not be left in piles or disposed of with ordinary trash unless properly handled and determined to be safe for disposal. Follow the product's Safety Data Sheet (SDS) and applicable fire code requirements for storage and disposal.

If a product spills or leaks, follow the manufacturer's emergency instructions and SDS. Do not attempt to clean up a hazardous-material release if doing so would put you or others at risk.

Resources

This information is based on nationally recognized fire and building-safety principles, including those developed by the **International Code Council (ICC)** and **National Fire Protection Association (NFPA)**. Applicable requirements may vary depending on the material, quantity, building and storage location.

For questions about fire and building code requirements in Milwaukee, contact the **City of Milwaukee Department of Neighborhood Services**.