

6 Steps to Comply with Hazardous Substances Storage Requirements



Hazardous substances are a common safety hazard in many workplaces across industry sectors. Under the OHS laws, employers must take appropriate steps to protect workers from these substances. For example, for those hazardous substances that are covered by the WHMIS requirements, you must ensure that they're properly labelled and that you have current MSDS/SDS information on them. And it's important that you properly store all hazardous substances, such as keeping those that are flammable away from heat sources and separating incompatible substances. Here are six steps you should take to comply with the hazardous substance storage requirements.

Defining Our Terms

This article discusses the storage requirements in the OHS regulations for hazardous substances in general. It doesn't cover special storage requirements for particular types of hazardous substances, such as explosives, diesel fuel and substances classified as 'controlled products' under WHMIS, or particular types of containers for hazardous substances, such as compressed gas cylinders.

Inventory Form

See the end of the article to download a model hazardous substance inventory form you can adapt and use when conducting an inventory in your workplace.

Take These 6 Steps

Although the OHS regulations in each jurisdiction have their own requirements for storing hazardous substances, these requirements have many things in common. Of course, you should always consult the requirements in your jurisdiction's OHS law. (You should also check the environmental laws, which may have storage requirements that apply to certain types and/or amounts of hazardous substances and types of storage containers, such as underground storage tanks.) But here are six basic steps to follow that will help you comply with those requirements:

Step #1: Conduct a Hazardous Substance Inventory

To ensure that you properly store the hazardous substances in your workplace, you must first know exactly how many and what kinds of substances are present. So take an inventory of all the hazardous substances handled, used and stored in your workplace. Use the results of this inventory to guide the rest of the steps.

Inventory Form

See the bottom of this article to download a model hazardous substance inventory form you can adapt and use when conducting an inventory in your workplace.

Step #2: Designate an Appropriate Storage Area

Storing hazardous substances is like real estate—it's all about location, location, location. That is, you can't store such substances in just any part of the workplace. For example, you shouldn't store them in the lunchroom where workers eat and drink or in an excavation or trench. Your storage area can be as small as a cabinet and as large as an entire room or even a building. An appropriate storage area for hazardous substances should:

- Be designed and constructed to provide for the safe containment of hazardous substances. For example, it should be fire-resistant and constructed from non-combustible and chemically-resistant structural materials;
- Be designed and maintained to allow for the safe movement of workers, equipment and material;
- Have adequate ventilation and lighting—but it should be out of direct sunlight;
- Be able to be maintained within an appropriate temperature range for the substances being stored in it;
- Be in a location not normally occupied by workers, such as a lunchroom, eating area, change room, clothing storage locker or passenger compartment of a vehicle; and
- Be in a location that's away from processing and handling areas and where PPE is stored.

In addition, in the event there's an incident involving the substances in storage, emergency eyewash/shower stations should be readily available near the storage location. And appropriate fire extinguishers and spill clean-up equipment should be nearby or in the storage area.

Step #3: Limit Quantities, if Practicable

Buying in bulk may be great for, say, toilet paper for your home. But the larger the number of hazardous substances that you keep on hand in the workplace, the greater the danger that an incident will happen—and that it'll be catastrophic. So try to keep the number of hazardous substances you have in storage as small as possible. For example, the federal OHS regulations say that quantity of a hazardous substance for use or processing in a workplace must, to the extent that's practicable, be limited to the quantity required for one work day.

Step #4: Store in a Manner to Reduce Hazards

The most fundamental requirement for storing hazardous substances is that you must store them in a manner that reduces the hazards they pose to workers. Here

are some of the safety measures you can use to fulfil this requirement:

- Store incompatible substances separately to prevent them from mixing if, say, a container leaks. Examples of incompatible substances include acids and bases; flammables and oxidizers; and water reactives and aqueous solutions. Note that separate storage doesn't necessarily mean different rooms'storing the incompatible substances far enough apart within the same area so that they couldn't mix if there's a leak or incident is sufficient;
- Before storing hazardous substances, inspect the containers to ensure that they're not damaged;
- Store such substances in the type of containers recommended by the manufacturer or supplier;
- Ensure that containers are tightly closed when they're in use;
- Store containers at a convenient height, ideally below eye level. If workers must reach overhead to remove containers from high shelves, there's an increased risk they'll drop the containers and spill the hazardous substances. If you must store containers on high shelves, provide appropriate step ladders for workers to use to safely access those containers;
- Store large or heavy containers on lower shelves'but not on the floor;
- To contain spills or leaks, store containers in trays made of compatible materials. For larger containers such as drums, provide dikes around the storage area and sills or ramps at door openings;
- Keep the storage area clean and tidy and ensure that good housekeeping practices are maintained in it; and
- Inspect the storage area and the containers in it regularly for any defects, including leaking or damaged containers or failing shelving. Correct all identified safety issues as soon as possible.

Step #5: Ensure Containers Are Properly Labeled

It's critical that containers of hazardous substances be properly labelled so that workers know exactly what's inside, what hazards the substance may pose and how it should be safely stored. For example, Saskatchewan's OHS regulations require containers to be clearly labelled with:

- The name
- Harmful characteristics of the substance; and
- Precautions to be taken for the safe storage of the substance.

So when you receive containers of hazardous substances, check the labels for this information. Also, regularly inspect the containers in your storage area for any missing, damaged or illegible labels that should be replaced.

Step #6: Post Warnings Signs

It's important to identify the room, cabinet or area where you store hazardous substances so that, say, workers don't eat there or bring heat sources into the location. So post signs, placards or similar means of identification on or near the hazardous substance storage area.

Bottom Line

Workers are most at risk from hazardous substances when handling or using them.

But the improper storage of such substances can endanger them, too. So don't overlook the hazardous substance storage requirements under the OHS laws. Instead, follow the basic steps outlined in this article and they'll help you comply with these requirements.