

Storage of agricultural pesticides and chemicals

OAR 437-004-1680

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This fact sheet will help you make decisions about storing pesticides on your farm or ranch. Because your decisions could have impact beyond the scope of Oregon OSHA compliance, this fact sheet offers suggestions for good practices in addition to telling you what our rules require. When you see the word “should” or “suggested,” we are offering an idea that may be good sense related to your civil liability or toward compliance with rules of other government agencies. Everything else is related to Oregon OSHA’s standard on this subject, **OAR 437-004-1680, Storage of Hazardous Chemicals**.

Where to Store

You should find a site not likely to flood or expose the chemicals to water. When possible, it should be at least 100 feet from surface water and downslope from wells and other sensitive factors like feed storage areas. Depending on how much you store, your site should also minimize the potential for run-off into streams or other areas. If prevailing winds in your area come mostly from one direction, locate the storage downwind from dwellings as much as possible.



The Storage Facility

Keep your storage area or facility as small as practical. This makes it harder for you to have more chemicals on site than you really need. Chemical storage must comply with instructions (usually found on the container or MSDS) of the chemical manufacturers. When storing pesticides, you must adequately separate chemicals that could cause a hazardous reaction if they are mixed. Each area must have a label according to the chemical category stored in it.

Chemical storage areas must have enough ventilation to keep air contaminants below the permissible exposure levels (PEL) in **OAR 437-004-9000, Air Contaminants**, and below 25% of the lower explosive limit (LEL) when employees enter the facility.

If you build a facility specifically for storage of restricted-use pesticides, try to use as much nonflammable material as possible. Nonabsorbent interior materials are best.

OR-OSHA rules require floors and shelves to be nonabsorbent or have nonabsorbent coatings when you store restricted-use pesticides.

There must be enough natural or artificial light inside the storage area to allow workers to work safely. The rule requires at least 20 foot-candles of light.

Control the temperature inside the facility so that your chemicals do not freeze and the conditions meet the storage recommendations of the manufacturer.

While it is smart business practice to lock any chemical storage area, OR-OSHA rules only require it when you store restricted-use pesticides.



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Safe Storage Practices

The most important rule is to follow any and all recommendations of the manufacturer. These are usually found on the chemical container, label, or material safety data sheet (MSDS). Oregon OSHA requires that you do this and has a rule that says, "Storage and removal of hazardous chemicals must not cause hazards to workers."

If the label, container, or MSDS becomes illegible, you can get the information from your supplier, the manufacturer, or on the Internet. You can't have unidentified chemicals without violating several government regulations and agencies. Use common sense: Do not store chemicals in containers normally used for other purposes, like plastic milk jugs. Even if the container has the proper label, you are inviting disaster. Do not store pesticides with non-related equipment.

Local Responders

Be certain to let your local emergency responders (fire and police) know where you keep your pesticides and other hazardous chemicals. If you keep certain very high hazard chemicals like aluminum phosphide you must post certain signs on your storage facility because it can become explosive when it contacts water. Other chemicals react badly with water and/or create toxic fumes when they burn. If any of your chemicals would be a hazard to responders, you have an obligation to warn them. Keep your MSDS and fire extinguishers where they are safely accessible, not where somebody would be in danger getting to them.



Sign required for
Aluminum Phosphide

Other Requirements

There are many other rules that apply to the storage of chemicals in general and to the storage and handling of restricted-use pesticides in particular. Some are:

- **OR-OSHA Subdivision 4/H, Flammable & Combustible Liquids**
- **OR-OSHA Subdivision 4/H, Hazardous Waste Operations & Emergency Response**
- **OR-OSHA Subdivision 4/I, Personal Protective Equipment**
- **OR-OSHA Subdivision 4/S, Electricity**
- **OR-OSHA Subdivision 4/Z, Air Contaminants**

Be sure to read **OAR 437-004-1680, Storage of Hazardous Chemicals**, for information not in this fact sheet.

Other Regulators

These agencies also have rules and responsibilities regarding the storage of pesticides and hazardous chemicals:

- **Oregon Department of Environmental Quality**
www.oregon.gov/DEQ/index.shtml
- **Oregon State Fire Marshall**
www.oregon.gov/OOHS/SFM/index.shtml
- **Building Codes Division**
www.cbs.state.or.us/external/bcd/
- **Oregon Department of Agriculture**
www.oregon.gov/ODA/index.shtml
- Your local fire and law enforcement agencies

The photos:

The photos in this fact sheet are of a newer, state-of-the-art storage facility for a very large agricultural business. Wouldn't we all like to have something like this? Realistically, most facilities are much smaller. However, regardless of the nature of your facility, the principles shown in the photos remain the same.