

Chemical Storage in Schools

There are a number of worker safety hazards found in schools, including slips, trips & falls, overexertion and sprains & strains, but chemical handling and usage is another often overlooked hazard that can pose significant risks for the health and safety of students, teachers and staff if not properly managed. Chemicals may come in different forms, such as liquids, solids or gases and each may pose a specific hazard. Hazards may include toxicity, flammability, corrosivity and even explosive. Faculty and staff may be at risk when using or handling chemicals, so proper training and taking precautions is essential.

The first step in determining these hazards is to perform a chemical inventory in each department. At first, you may think the inventory is easy, but never underestimate where chemicals are used. Meeting with department heads, teachers or anyone who may oversee chemical usage in their area would be beneficial in getting an accurate list.

THINK OUTSIDE THE BOX WHEN PERFORMING AN INVENTORY!!!

Some of the departments and potential chemicals include:

1. Laboratory –acids, bases, flammables, toxics or corrosives.
2. Industrial and Shop Classes –inks or degreasers.
3. Art Supplies –paints or photographic chemicals.
4. Landscaping –fuels, fertilizers, herbicides, pesticides and deicing material.
5. Maintenance/janitorial –drain cleaners, cleaning supplies, solvents, paints, fuels or mercury-containing items.
6. Repair Shops –fuels and oils.

Once you have identified where the chemicals are being used, you will want to evaluate if the chemicals are being handled and stored safely. Below is a guide to help assist you with the evaluation. Although not a complete list, it can be a solid place to start:

- 1) Designated storage areas
 - a. Designate specific areas for chemical storage.
 - b. Ensure they are well-ventilated.
 - c. Use cabinets or closets with secure locks to prevent unauthorized access.
- 2) Chemical Compatibility
 - a. When storing chemicals, ensure their compatibility.
 - b. Keep chemicals that may react with each other separate to avoid reactions.
 - c. Use chemical charts to identify compatible substances.
- 3) Labeling
 - a. All chemical containers should be clearly labeled with the identify, hazard warnings and special handling requirements.
 - b. If labels are defaced or unclear, remove them and replace them with a legible label.
- 4) Ventilation
 - a. Periodically check ventilation to ensure a good airflow.
 - b. Ensure all containers are covered when not in use.
- 5) Shelving and Storage of Containers
 - a. Confirm shelving and cabinets are compatible with the material being stored.
 - b. Avoid storing chemicals on the floor or in areas with high traffic.
- 6) Quantity limits
 - a. Limit quantities of chemicals to what is necessary for expected purposes.

- b. Avoid excessive stockpiling.
 - c. Perform routine cleanout of old and unused chemicals and dispose of them properly.
- 7) Emergency Equipment/Emergency Procedures
- a. Keep emergency equipment such as spill kits accessible and refilled when necessary.
 - b. Keep eye wash/safety shower stations and fire extinguishers accessible and in proper working order.
 - c. Review emergency procedures with staff and make changes when necessary.
 - d. Ensure all staff and students understand procedures for chemical spills and accidents, including evacuation plans.

Finally, put together a program to inspect chemicals. Note any areas that pose a hazard and ensure they are resolved in a timely manner. Check for proper storage amounts, incompatible storage issues, damaged shelving/cabinets, uncovered chemicals or anything missing. Routinely train staff and students on the specific hazards of the chemicals and precautions to take.

Chemical storage in schools is critical to ensuring the safety of students and staff. Proper storage helps prevent accidents, spills and exposure to these chemicals. Be sure to develop an effective program for your school and identifying these hazards is critical to a safe workplace.

If you need help identifying potential hazards in your workplace, please contact Andy Sawan, Risk Services Specialist at Sedgwick, at andrew.sawan@sedgwick.com or 330-819-4728.