

Discussion and Notes

If using the notes for training, keep a copy of these safety training notes and a signed attendance sheet to verify regular safety training. Regulatory inspectors will usually request proof of safety training.

GHS-compliant Safety Data Sheets for every Flinn chemical may be found online on the Flinn website at www.flinnsci.com/sds/ Access them anywhere, anytime!

Take Control of Your Chemical Inventory

With the availability of new software tools for chemical inventory management, all science instructors can and should document the chemicals they use in their labs. Tracking chemical use gives you a real opportunity to improve chemical safety at your school. This process will also greatly simplify the typical end-of-the-year inventory task and help you reduce the hazards and costs associated with dangerous or unwanted chemicals.

Chemical Inventory—What Is Required?

Federal and state occupational health and safety regulations require schools to maintain an accurate and up-to-date inventory of all chemicals that may present a physical or health hazard. The inventory list of hazardous chemicals serves as the focal point for and thus integrates all provisions of your school's hazard communication program or Chemical Hygiene Plan. These provisions include updated GHS Safety Data Sheet and labeling requirements, as well as information and training that are needed to identify hazards and prevent exposure to hazardous chemicals.

Features of the Chemical Inventory

The following minimum information must be present in the chemical inventory:

- Name of each chemical
- Location(s) where it is stored
- Amounts of the chemical

Because the inventory serves to identify hazardous chemicals to which employees may be exposed, the name of the chemical in the inventory should match the name on the container label. Including the CAS number for each chemical in the inventory will help avoid misunderstandings when hazardous chemicals are sometimes identified using common names or synonyms. The CAS number is a unique identifier—one chemical, one number, and vice versa. The storage location for each chemical container should specify the school or building, if appropriate, as well as the specific room and shelf or cabinet. The chemical inventory should provide a mechanism to easily update the amounts of chemicals removed for use during the year or added as a result of a purchase. The ability to track the history of use of a chemical is essential for solving the main problem associated with chemical inventories in schools: how to identify chemicals that are seldom if ever used.

A Safety Data Sheet (SDS) is required for every hazardous chemical. An ideal chemical inventory will therefore provide a means to verify that the school has the SDS and if the SDS has been updated with new hazard information. The SDS may be linked electronically to the inventory. Additional features may be incorporated into the chemical inventory to improve chemical management and hazard communication. These include how to store chemicals in a chemically compatible and safe manner; special storage recommendations for flammable, corrosive and highly toxic chemicals; and whether licensed disposal is required for a chemical. Summarizing GHS hazard information, such as pictograms and hazard statements, in the chemical inventory is helpful for labeling transfer containers or solution bottles.

Tracking Chemical Use

- Remember to dress appropriately and wear personal protective equipment when removing or using chemicals from the stockroom.
- Update the chemical inventory by entering the amount of each chemical to be deducted from stock. Most inventory programs will automatically enter the date and user name of the person updating the record. Enter this information if needed and a brief comment note, if possible, with the intended use of the chemical.
- Many chemical inventory programs provide a history field or function that will keep track of all the updates to the amounts of chemicals, including additions (purchases) and deductions (usage). This function is critical for tracking chemical use in science labs, as well as for the next step—reviewing lab activities on a regular basis to improve science instruction.

Reviewing and Planning Future Lab Activities

Improving safety begins by reviewing the list of chemicals used in experiments and demonstrations for lab science courses. After compiling this list, many departments find that half of the chemicals in their inventory are never used. In reviewing current lab activities, carefully compare the hazards of chemicals versus the learning goals and objectives. Some chemistry instructors often use lead nitrate, for example, to precipitate lead iodide and demonstrate double replacement reactions or crystal formation. It's a beautiful demonstration! However, is the need for licensed hazardous waste disposal of the heavy metal used in this demonstration justified in terms of the learning goals? Would another demonstration, such as precipitating copper phosphate, accomplish the same objective? Tracking chemical use will allow you to plan "greener" and safer activities for the science curriculum.

Flinn Online Chemventory™ Includes SDS and GHS Label Printing

Flinn Scientific has developed a cloud-based chemical inventory system to help you comply with federal, state and local regulations, fulfill GHS requirements in the revised Hazard Communication Standard, and track chemical use in the department. Flinn Online Chemventory™ includes ALL of the essential and special features described above. The program will allow you to maintain an accurate inventory of laboratory chemicals while permitting multiple users to access and enter information in the database from multiple locations and multiple devices. Flinn Safety Data Sheets have been linked electronically to each Flinn chemical in the online database format. GHS hazard summaries have also been preloaded into the program, with functionality provided to print new chemical labels that include this information. Please visit our website at <http://chemventory.flinnsci.com/> to learn about the features and benefits of Flinn Online Chemventory™.

Thank You for Your Support

Please continue to support our efforts to improve safety in science labs by ordering your laboratory chemicals and science supplies from Flinn Scientific.

FLINN
SCIENTIFIC
"Your Safer Source for Science"