

DEPARTMENT OF EDUCATION
OFFICE OF THE SECRETARY
885 Health and Safety

885 Safe Management and Disposal of Chemicals

1.0 Purpose

The purpose of this regulation is to outline the criteria and processes for chemical storage and use in the classroom, laboratory, or other instructional areas. This regulation sets forth the requirements for the safe procurement, management, storage, and disposal of chemicals. Additional information may be found in the *Safety First: Safe Instructional Practices in the Classroom and Laboratory* manual.

20 DE Reg. 975 (06/01/17)

26 DE Reg. 51 (07/01/22)

2.0 Definitions:

The following words and terms, when used in this regulation, shall have the following meaning unless the context clearly states otherwise:

"Carcinogen" means any known or suspected chemical that can cause cancer.

"Chemical" means any element, compound, or mixture of elements or compounds.

"Chemical Inventory" means a list of all materials and chemicals for which a Safety Data Sheet or "SDS" must be maintained.

"Chemical Name" means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry or "IUPAC" or the Chemical Abstracts Service or "CAS" rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard analysis.

"Chemical Procurement" means the acquisition of any chemicals.

"Common Name" means any designation or identification such as a code name, code number, trade name, brand name, or generic name used to identify a chemical other than its chemical name.

"Corrosive" means causing visible destruction of or irreversible alterations in living tissue by chemical action at the site of contact.

"Department" means the Delaware Department of Education.

"Engineering Control" means a physical modification to a process, or process equipment, or the installation of further equipment with the goal of preventing the release of contaminants and improve safety conditions.

"Explosive" means causing a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

"Expose" or **"Exposure"** means an instance where an individual is subjected to or potentially subjected to a hazardous chemical through any route of entry (inhalation, ingestion, skin contact or absorption, etc.).

"Hazardous Chemical" means any element, compound or mixture of elements which presents a physical hazard or health hazard.

"Health Hazard" means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed persons. The term "Health Hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. The Safety Data Sheet or "SDS" will provide information to determine whether or not the chemical is a health hazard.

"Instructional Area" means a room or defined space used for an educational activity such as a classroom, a laboratory, a field, a special building, greenhouse, or any other space where educational activities may take place.

"Long-Term Storage" means the storage of any chemical for a time period past the end of the school day.

"Non-hazardous Chemical" means any element, compound or mixture of elements or compounds which do not present a physical hazard or health hazard as indicated by the Safety Data Sheet.

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"Occupational Safety and Health Administration" or **"OSHA"** means the government agency which is part of the United States Department of Labor that develops guidelines to maintain a healthy and safe working environment.

"Personal Protective Equipment" or **"PPE"** means equipment worn to minimize exposure to hazards that cause serious injuries and illnesses. These injuries and illnesses may result from contact with chemical, radiological, physical, electrical, mechanical, or other hazards. Personal protective equipment may include, but is not limited to, items such as gloves, safety glasses and shoes, earplugs or muffs, hard hats, respirators, or coveralls, vests and full body suits.

"Physical Hazard" means a chemical which is identified by the Safety Data Sheet as a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

"Safety Data Sheet" or **"SDS"** means a document that contains information on the potential health effects of exposure to chemicals, or other potentially dangerous substances, and on safe working procedures when handling chemical products. It contains hazard evaluations on the use, storage, handling and emergency procedures related to that material. The Safety Data Sheet contains more information about the material than the label and is prepared by the supplier. It is intended to tell what the hazards of the product are, how to use the product safely, what to expect if the recommendations are not followed, what to do if accidents occur, how to recognize symptoms of overexposure, and what to do if such incidents occur.

"Safety First: Safe Instructional Practices in the Classroom and Laboratory Manual" means the collection of documents that outline the mandatory safety procedures regarding the safe management, storage, and disposal of chemicals for instructional areas in Delaware public schools and which may be amended from time to time as published in the *Delaware Register of Regulations*. The manual also provides safety practices that are governed by this regulation. This document is available on Digital DE: <https://education.delaware.gov/digital-de/instructional-resources/content-specific-resources/>.

"Short-Term Storage" means the storage of any chemical for a time period before the end of the school day.

"Storage" means a space for the containment of chemicals or other materials.

"Surplus Chemical" means any chemical that is no longer useable or needed.

"Useable" means that the chemical or other material has not surpassed its expiration date.

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3.0 Applicable Areas

This regulation is applicable to all public schools, including charter schools and all programs they offer, not already regulated by OSHA standards, including but not limited to science education (including classrooms, laboratories, combination classroom and laboratory settings, and outdoor education settings); Career and Technical Education; Technology and Engineering Education; Agricultural Education; Family and Consumer Science Education, Art Education; and Athletics or Athletic Training.

26 DE Reg. 51 (07/01/22)

4.0 Chemical Hygiene Plan

4.1 All Delaware public schools shall have a Chemical Hygiene Plan that outlines specific school district's or charter school's procedures in the area of staff and student chemical safety. The plan shall include at least the following:

4.1.1 Identification of at least one Chemical Hygiene Officer for the school district or charter school who shall:

4.1.1.1 Act as liaison between teachers, building administration, facilities staff, and the Department regarding chemical safety issues;

4.1.1.2 Maintain the chemical inventory for the school;

4.1.1.3 Approve all chemical procurement by the school district or charter school;

4.1.1.4 Maintain a supply of SDS for all chemicals in the chemical inventory. The SDS may be paper or electronic, and be easily accessible from outside of the facility;

4.1.1.5 Assist with maintenance requests related to safety equipment;

4.1.1.6 Identify and coordinate disposal of hazardous chemical wastes with the Department and chemical disposal vendors; and

4.1.1.7 Provide prior approval for new laboratory operations, procedures, or activities proposed by educators.

4.1.2 Standard operating procedures associated with chemical procurement, chemical use, chemical storage, chemical disposal (both hazardous and non-hazardous), and the handling of chemical spills.

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5.0 Inventory of Chemicals

5.1 Each school district and charter school shall prepare a chemical inventory for each of its schools by September 15 of each year. A copy of this chemical inventory, along with the respective SDS, shall be maintained by the school principal or head of school, chief custodian, and the identified Chemical Hygiene Officer. Additionally, copies shall be maintained in the chemical storage area and with the school nurse or school health manager. The chemical inventory, both hazardous and non-hazardous, shall contain at least the following information:

5.1.1 The name of the chemical;

5.1.2 The amount of the chemical (in appropriate measurement units);

5.1.3 The location where the chemical is stored;

5.1.4 The date of procurement. If the date of procurement is unknown, the earliest known date of ownership shall be indicated; and

5.1.5 The form or state (e.g. powder, solution, vapor, etc.) of the chemical.

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6.0 Chemicals with Special Conditions

6.1 Mercury and mercury compounds, both organic and inorganic, shall not be present in or used in public schools, including charter schools in Delaware. Schools may continue to use mercury discharge tubes and fluorescent lights even though they contain a small amount of mercury gas because the mercury is enclosed in the glass container.

6.2 Known carcinogens shall not be present in or used in public schools, including charter schools in Delaware. A listing of known carcinogens can be found in *Safety First: Safe Instructional Practices in the Classroom and Laboratory*.

6.3 All public schools, including charter schools, shall comply with current Environmental Protection Agency (EPA) regulations regarding regulated refrigerants.

6.4 Further provided chemicals may be identified as "chemicals with special conditions" or "banned" are not to be present or used in public schools, including charter schools because of updated knowledge of the chemicals.

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7.0 Storage of Chemicals

7.1 The storage of all chemicals shall conform to the mandatory specifications stated in *Safety First: Safe Instructional Practices in the Classroom and Laboratory*.

7.2 Chemicals in the instructional area shall be for immediate use only (short-term storage). All long-term storage of chemicals shall be in a properly equipped chemical storage room.

7.3 Pressurized storage of liquids and gases shall conform to current OSHA storage and handling regulations.

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8.0 Management of Chemicals

8.1 Instructional staff shall provide annual training in the safe management of chemicals to all students in instructional areas that use chemicals. All students shall sign a student safety acknowledgement at the conclusion of this training. The training shall be age and grade appropriate for the students and shall include at least the following:

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- 8.1.1 An overview of the school safety program;
- 8.1.2 The location of all hazardous chemical containers in the instructional area;
- 8.1.3 An explanation of how to read labels on containers;
- 8.1.4 The location, availability and content of SDS and an explanation of how they are used;
- 8.1.5 An explanation of the nature of physical and health hazards associated with the use of all hazardous chemicals (regardless of quantity) to which they may be exposed;
- 8.1.6 An explanation of the proper handling, storage and disposal methods for each of the hazardous chemicals present in the instructional area; and
- 8.1.7 Measures taken by the instructional staff and school personnel to prevent or control exposure such as engineering controls, personal protective equipment, and emergency procedures for spills or leaks.

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9.0 Disposal of Surplus Chemicals

- 9.1 Disposal of surplus non-hazardous chemicals shall be carried out by the school district or charter school in accordance with procedures outlined in the SDS.
- 9.2 Disposal of surplus hazardous chemicals shall only be disposed of through the use of a licensed waste hauler.
 - 9.2.1 Each school district and charter school shall prepare a list of surplus hazardous chemicals and submit it to the Department's Education Associate, Science by November 15 of each year. The Department shall arrange for a licensed waste hauler to take the chemicals to a proper waste facility for disposal. The cost of disposal shall be prorated among the participating schools. Alternatively, a school district or charter school may independently contract with a licensed waste hauler. An official letter shall be sent to the Education Associate, Science describing the school's intentions and naming the licensed waste hauler. The licensed waste hauler shall provide the school district or charter school with a manifest of items removed. This manifest shall be retained by the school district or charter school for at least five years from the collection date.

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26 DE Reg. 51 (07/01/22)

10.0 Facility Requirements for Instructional Areas that use Hazardous Chemicals

- 10.1 Basic safety equipment shall be installed in all instructional areas that use hazardous chemicals and shall conform to the requirements outlined in *Safety First: Safe Instructional Practices in the Classroom and Laboratory*. Non-traditional instructional areas such as an outdoor classroom or an agricultural field shall include all of the safety equipment as warranted and deemed necessary based on the hazard level of the lesson and materials being used in the instruction of students. Basic safety equipment shall include at least the following items:
 - 10.1.1 Eyewash (running water, continuous flow style);
 - 10.1.2 Acid or chemical shower (continuous flow style);
 - 10.1.3 Eye protection (wrap-around, splash-shield style goggles);
 - 10.1.4 ABC Fire extinguisher;
 - 10.1.5 Fire blanket; and
 - 10.1.6 Chemical spill equipment.
- 10.2 A properly functioning fume hood or other industry-standard ventilation system shall be used when mixing chemicals, using chemicals, or for short-term storage of chemicals that release hazardous fumes. The determination that hazardous fumes may be released is made by a hazard analysis and a review of the SDS document. Fume hoods and other ventilation systems shall conform to the requirements outlined in *Safety First: Safe Instructional Practices in the Classroom and Laboratory*.
- 10.3 All instructional areas that use hazardous chemicals which are constructed, reconfigured, or renovated after September 1, 2011 shall provide adequate space for student work at a minimum of 50 square feet per student.
- 10.4 All instructional areas that use hazardous chemicals shall have at least two means of egress. The second exit may pass through another room or a non-chemical storage room if it is used only as an emergency exit.

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11.0 Assurance of Safety Practices

Each school district or charter school shall submit an assurance letter annually to the Department's Education Associate, Science no later than November 15. The assurance letter shall verify that the school district or charter school's hazardous chemical management program has been reviewed for compliance, and is compliant with this regulation and the corresponding sections of *Safety First: Safe Instructional Practices in the Classroom and Laboratory*.

8 DE Reg. 346 (08/01/04)

10 DE Reg. 1432 (03/01/07)

15 DE Reg. 1002 (01/01/12)

20 DE Reg. 975 (06/01/17)

26 DE Reg. 51 (07/01/22)