

## DHHS POLICIES AND PROCEDURES

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| <b>Section V:</b>               | <b>Human Resources</b>                                |
| <b>Title:</b>                   | <b>Safety and Benefits</b>                            |
| <b>Chapter:</b>                 | <b>Flammable, Toxic, and Caustic Chemicals Policy</b> |
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### Purpose

The purpose of this policy is to establish procedures for the safe handling and storage of flammable, toxic, and caustic chemicals throughout DHHS. This program is to serve as a guide for DHHS employees as a method to prevent or minimize exposure to flammable, toxic, and caustic chemicals.

### Policy

It is the policy of DHHS to protect employees, patients, clients, residents, visitors and any other individuals who work with or in close proximity to flammable, toxic, and caustic chemicals. This policy complies with safety standards as prescribed in the Occupational Safety and Health Administration's (OSHA's) Flammable Liquid Standard - [29 CFR 1910.106](#) and the Hazard Communication Standard - [29 CFR 1910.1200](#).

### Definitions

**Caustic Material** - A substance capable of destroying or eating away by chemical reaction.

**Explosive Material**. - A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure or high temperature.

**Flammable Liquid, Category 1** - A liquid with a flashpoint below 73.4°F (23°C) and a boiling point at or below 95°F (35°C).

**Flammable Liquid, Category 2** - A liquid with a flashpoint below 73.4°F (23°C) and a boiling point above 95°F (35°C).

**Flammable Liquid, Category 3** - A liquid with a flashpoint at or above 73.4°F (23°C) and at or below 140°F (60°C).

**Flammable Liquid, Category 4** - A liquid with a flashpoint above 140°F (60°C) and at or below 199.4°F (93°C).

**Flashpoint** - The minimum temperature at which a liquid will give off sufficient vapors to form an ignitable mixture with the air near the surface of the liquid (or in the vessel used).

**GHS** - Globally Harmonized System, a system of classification and labeling of chemicals.

**Hazardous Material** - Any substance or mixture of substances having properties capable of producing adverse effects on the health and safety of a human being. It can be flammable, combustible, toxic, caustic, explosive or radioactive.

**PPE** - Personal Protective Equipment, specific protective gear, approved by the American National Standards Institute (ANSI), that will help guard an employee from exposure to a hazard created. Specific PPE identified, i.e.; respirator, gloves, eye protection, etc., will be outlined in each SDS.

**Radioactive Material** - The property that some elements have of spontaneously disintegrating into another element by emitting alpha particles, beta particles, neutrons or gamma radiation from the nucleus of an atom.

**SDS** - Safety Data Sheet, information sheet(s) furnished by the manufacturer noting specific information regarding chemical composition chemical reactions, transporting, storage and safe handling requirements through the use of PPE.

**Toxic Material** - A substance that through chemical reaction or mixture will produce possible injury or harm to the body by entry through the skin, digestive tract, or respiratory tract. The toxicity is dependent on the quantity absorbed and the rate, method, and site of the absorption.

## **Roles and Responsibilities**

### **Safety Programs Manager**

The Safety Programs Manager (SPM) ensures that a written flammable, toxic, and caustic chemicals policy is in place. The SPM reviews the plan periodically.

### **Safety Officer**

The Safety Officer monitors his/her assigned area to ensure compliance with this policy. The Safety Officer oversees and monitors the effectiveness of the Flammable, Toxic, and Caustic Chemicals plan. The Safety Officer coordinates training and maintains documentation in accordance with this policy.

### **Manager/Supervisor**

The manager/supervisor ensures that employees comply with the guidelines established by this policy. The manager/supervisor ensures that designated staff complete required training prior to working with or in close proximity to flammable, toxic, or caustic chemicals.

### **DHHS Staff**

Staff are responsible for complying with this policy. Affected staff complete training as required and follow established safety procedures.

## Procedures

### Procurement

The person(s) purchasing a new product for a site will ensure that the safety representative has reviewed the SDS prior to purchase. No new hazardous chemical should be introduced until all employees who will work with the product have received proper training.

### Storage

- Hazardous materials are stored in approved storage area(s), away from exit egress.
- All toxic and caustic materials are to be stored in their original containers in the storage area with an intact label. When chemicals are placed in a container, other than the original container, the new container will be approved for the type of chemical to be in it and marked with a label consistent with the SDS required data, and with GHS guidelines (see *Labeling* section below).
- All flammable chemicals are stored in an approved flammable cabinet.
- All toxic and caustic (corrosive) chemicals are stored in such a way as to prevent the mixing of chemicals, based on pH levels (incompatibles). Low level pH (0-2) will not be stored with higher pH (11-14). Storage will be in compliance with [NC Fire Code, Chapter 27](#).
- Flammable and corrosive cabinets will not be placed next to an exit, or in any exit egress or pathway.
- No more than 60 gallons of Category 1,2 or 3 flammable liquids, and no more than 120 gallons of category 4 flammable liquids may be stored in an individual storage cabinet.
- No more than three flammable cabinets may be located in a single storage area. Quantities in excess of this must be stored in an inside storage room.
- Inside storage rooms must be constructed to meet the required fire-resistive rating for their use as set forth in Standard Methods of Fire Test of Building Construction and Material, NFPA 251-1969. Openings to other rooms or buildings must have noncombustible liquid-tight raised sills or ramps at least 4 inches in height, or the floor in the storage area must be at least 4 inches below the surrounding floor. Openings must have approved self-closing fire doors. The room must be liquid-tight where the walls join the floor. A permissible alternate to the sill or ramp is an open-grated trench, inside of the room, which drains to a safe location.
- Special containers should be provided for flammable/oily rags. All receptacles must be emptied nightly into a larger drum in a chemical storage area. Rags, if not laundered on-site, should be included in a recycling program (closed-loop system).
- Compressed gases (Mapp gas, propane, or cylinders for welding) may only be stored in an enclosed cabinet with proper venting. Compressed gases must be stored in a well ventilated area, preferably in a protected outdoor location, away from exit doors. Incompatible gases must be stored in compliance with the most current [NC Fire Code; Chapter 30](#).

- All flammable, toxic and caustic substances will be stored in their proper cabinets at the end of each work day. Minimal amounts of chemicals used on a daily basis may be kept at the work site and should be minimized to reduce possible exposure/hazards.

### **Labeling Requirements**

Labels, as defined in the Hazard Communication Plan, are an appropriate group of written, printed or graphic informational elements concerning a hazardous chemical that are affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging. All hazardous chemical container labels must be written in English and contain the following:

- Product identifier – including, but not limited to, the chemical name, code number or batch number.
- Signal word - used to indicate the relative level of severity of the hazard and alert the reader to a potential hazard on the label. There are only two words used as signal words, “Danger” and “Warning.”
- Hazard statements - describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard. For example: “Causes damage to kidneys through prolonged or repeated exposure when absorbed through the skin.”
- Pictogram - graphic symbols used to communicate specific information about the hazards of a chemical.
- Precautionary statement - describe recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to the hazardous chemical or improper storage or handling.
- Name, address, and phone number of chemical manufacturer, importer, or other responsible party.

All chemicals will either have the original labels maintained, or appropriate secondary labeling, meeting the requirements listed above. All chemicals will be labeled, with the exception of a chemicals that has direct supervision of the user at all times.

### **Poisonous Substances**

Poisonous substances or chemicals are those that pose a very high (Class I) caustic hazard due to their toxicity (i.e. - methyl alcohol, sulfuric acid, caustic soda). There are special precautions for the control and use of each of these type of products. Only trained employees may use or supervise use of these chemicals.

### **Pesticides/Herbicides**

Pesticides are only used or applied by trained individuals holding an appropriate license when necessary. Pesticides will be stored in proper storage areas according to the SDS and environmental regulations.

### **Disposal**

Chemicals that are no longer considered viable or have byproducts produced through use are disposed according to hazardous waste disposal guidelines and regulations. Chemicals are not mixed unless permitted by manufacturer’s instructions.

Unused chemicals that are not waste are to be returned to the original container and stored in the appropriate storage area.

### **Spills**

It is the responsibility of each location to ensure that proper spill clean-up kits are available when required, according to the chemicals present in that area, such as; acid neutralizer, mercury kits, absorbent mats/pillows, drain covers, plastic bags, etc. Only those individuals trained and authorized to clean chemical spills are permitted to do so.

### **Training**

Training for the use of flammable, toxic, and caustic chemicals is administered during Hazard Communication training for employees that are required to work with or in close proximity to such chemicals according to the Hazard Communication Plan.

### **References**

- OSHA General Industry Standard, Hazard Communication, [29 CFR 1910.1200](#)

*For questions or clarification on any of the information contained in this policy, please contact [Human Resources](#). For general questions about department-wide policies and procedures, contact the [DHHS Policy Coordinator](#).*