

Workplace Labeling Requirements

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1. Purpose and Scope

In 2015, Canada updated the federal Workplace Hazardous Materials Information System (WHMIS) legislation (referred to as WHMIS 2015) [1]. The updated WHMIS legislation replaces the original WHMIS (referred to as WHMIS 1988).

Container labels are a critical element of the new WHMIS 2015, since both supplier and workplace labels provide information about the hazards of a chemical or a product.

WHMIS legislation requires that products used in the workplace that meet the criteria of a hazardous product must be labelled. By virtue of Subdivision 5 of Division II of Chapter III of the *Act Respecting Occupational Health and Safety* (Chapter S-2.1) [2], “... no employer may allow a hazardous product to be used, handled or stored in a workplace unless the product has a label and a safety data sheet that comply with this subdivision and the regulations under it and unless a worker who is exposed or likely to be exposed to the product has received the training and information required to safely carry out the work entrusted to him.”

This document details the requirements for workplace labels on hazardous product containers. These requirements are applicable university-wide, including Research and Teaching Laboratories, Workshops and Studios across all Faculties and Service Departments.

Workplace labels are an efficient means of communication of physical and health hazard information that must be available to anyone that uses, handles, stores or disposes of hazardous products. As a result, users (workers, students) will have information that will avoid injuries and incidents related to exposures to hazardous products.

2. Definitions^a

“**Container**” means any package or receptacle, including a bag, barrel, bottle, box, drum, can, cylinder or storage tank.

“**Employer**” means a person who, under a contract of employment or a contract of apprenticeship, even without remuneration, retains the services of a worker; an educational institution is deemed to be the employer of a student in cases where, under a regulation, the student is deemed to be a worker or a construction worker.

“**Hazardous product**” means a hazardous product within the meaning of the *Hazardous Products Act* that is classified in accordance with the Hazardous Products Regulations, in a category or subcategory of a hazard class.

“**Label**” means a group of written, printed or graphic information elements that relate to a hazardous product, which group is designed to be affixed to, printed or written on or attached to the hazardous

^a Adapted from *Act Respecting Occupational Health and Safety* (chapter S-2.1, s. 223) [2] and Subdivision 5 of Division II of Chapter III of the corresponding act *Hazardous Products Information Regulation* (chapter S-2.1, r 8.1) [3].

product or the container in which the hazardous product is packaged. It can refer to both a supplier's label and a workplace label.

“Precautionary statement” means a phrase that describes the recommended measures to take in order to minimize or prevent adverse effects resulting from exposure to a hazardous product or resulting from improper storage or handling of a hazardous product. Such statement may include the general precautionary statements and the prevention, response, storage and disposal precautionary statements contained in Section 3 of Annex 3 of the United Nations document entitled *Globally Harmonized System of Classification and Labelling of Chemicals (GHS)*, Fifth Revised Edition.

“Significant new data” means new data regarding the hazard presented by a hazardous product that change its classification in a category or subcategory of a hazard class, or result in its classification in another hazard class, or change the ways to protect against the hazard presented by the hazardous product.

“Supplier” means a person who, in the course of business, sells or imports a hazardous product within the meaning of the *Hazardous Products Act*.

“Supplier label” means a label required under the *Hazardous Products Act* and that meets the requirements set out in the *Hazardous Products Regulations*.

“Transfill” means to transfer a hazardous product into another container for the sole purpose of using it in the workplace, with no intention of selling it.

“Worker” means a person, including a student in the cases determined by regulation, who, under a contract of employment or a contract of apprenticeship, even without remuneration, carries out work for an employer.

“Workplace label” means a label prepared by an employer that meets the requirements set out in the Regulation.

3. When must a workplace label be placed on a container?

As long as the hazardous product remains in its **original container** with a compliant supplier label on it, no additional labeling is required.

There are four (4) situations when workplace labels are required:

1. A hazardous product is produced (i.e., synthesized or prepared) and will be used on-site by several individuals and will be stored for a long period of time or will leave the workplace. It must be stocked in a suitable (chemically compatible) container.

Example: Preparation of acidic or basic solutions. The workplace label affixed on the diluted solution bottle must display the appropriate information.

2. A hazardous product is transferred into another container. When a hazardous product that has a label is transferred, the employer must ensure that the container into which the product is transferred has a label with similar, equivalent or adapted information.

Example: Solvent squeeze bottles

3. The supplier label on the original container becomes illegible, defaced or is missing. Figure 1 presents an example of a defaced supplier label displaying partially illegible information.

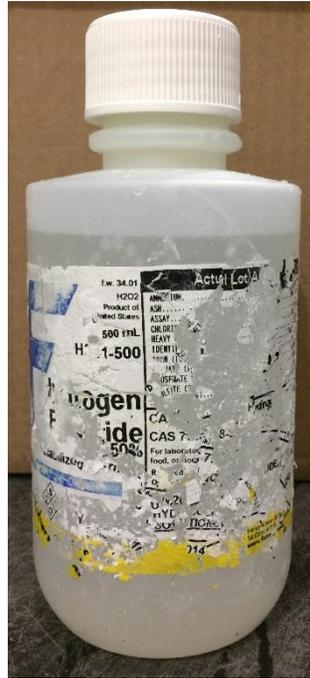


Figure 1. Hazardous product container displaying a defaced supplier label. A compliant workplace label must be affixed.

A defaced, illegible or missing supplier label must be immediately replaced with a workplace label. In this specific case, the replacement label must contain the same information as the original supplier label it replaces or updated information, if significant new data is available (please see section 4 of these guidelines). The same applies for workplace labels created in the workplace as described in 1 and 2.

In situations where there is double containment (two containers), the workplace label must also be affixed on the outer container of a hazardous product if the supplier label on the inside container is no longer visible through the outer container.

4. A WHMIS 1988 supplier label is present. For this situation, see Section 6 as the application and related requirements will vary depending on workplaces and activities involved.

Exemptions: No workplace label is required:

- 1) On a portable container that is filled directly from a container of a hazardous product with a compliant supplier label if:
 - a) The hazardous product is under the control of the person who decanted it and is used exclusively by the worker who filled the portable container.
 - b) The hazardous product is used in its entirety immediately or only during the shift (typically less than one working day) in which the portable container was filled.

2) On containers with products considered as isolated reaction intermediates that are intended to be used in a multi-step synthetic sequence, and for which physical and health hazard information along with corresponding Safety Data Sheets (SDSs) are unknown or unavailable.

3) On containers that have a capacity not exceeding 3 mL (typically vials) and when the workplace label interferes with the use of the product under normal conditions of use.

When the abovementioned apply (personal use, one work shift, intermediates, size of containers), the hazardous product container must bear at least the name of the product or an abbreviation of that name along with any relevant information (e.g., solution concentrations, lab book number, CAS number, etc.) in order to allow the determination of the contents, when required.

4. What information must be displayed on a workplace label?

WHMIS sets less stringent requirements for an acceptable and compliant workplace label compared to the elements required on a supplier label. Moreover, the *Hazardous Products Information Regulation* and corresponding Act do not define any required format but **there are three (3) elements that must be displayed on a workplace labels:**

1) **Product Name**

The exact name as displayed on the Safety Data Sheet (SDS). Abbreviations and formulas must not be used.

2) **Safe Handling Precautions**

- WHMIS 2015 pictograms,
- Hazard and/or Precautionary statements carefully chosen from the SDS,
- Personal Protective Equipment pictograms may be included in this section.

3) **Reference to the Safety Data Sheet (SDS)**

This reference is intended to inform the user that an SDS is available (whether as an electronic or print version).

An example of a compliant workplace label displaying the three (3) mandatory elements is represented in **Figure 2**.

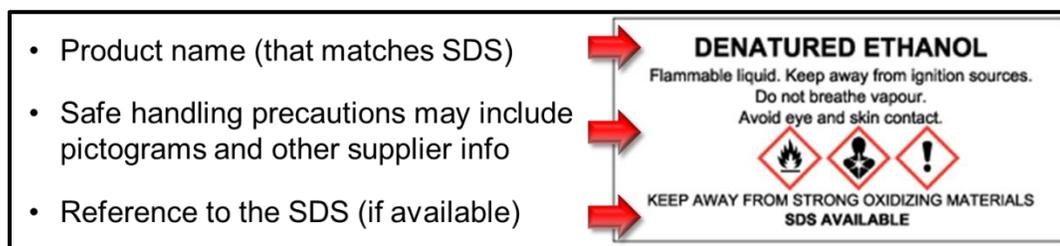


Figure 2. Information that must be displayed on a workplace label (left) and example of a compliant workplace label for Denatured Ethanol (right).

Depending on the room available on the label, additional information can be displayed on a workplace label, including a signal word, the CAS number, the Molecular Weight, some physical data, or a chemical compatibility chart for storage or disposal, as represented in **Figure 3**.

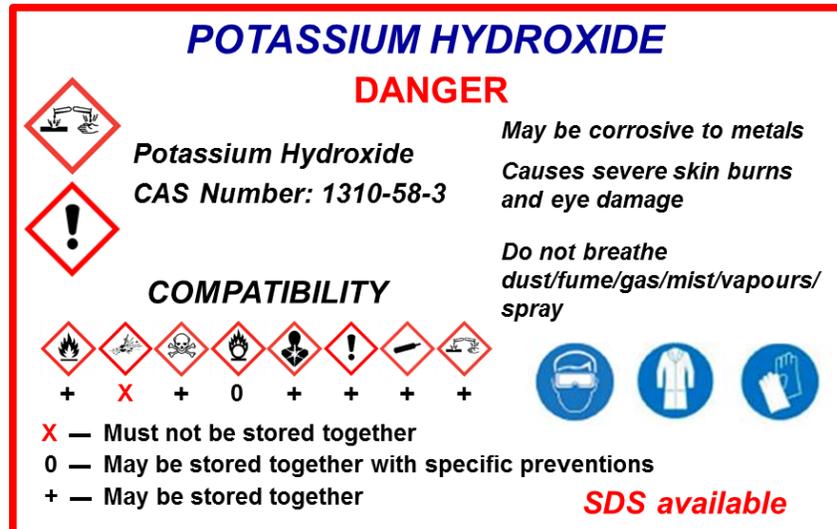


Figure 3. Example of a workplace label with required and additional information.

According to the *Hazard Products Information Regulation*:

1) The information on a workplace label must be clear, specific and consistent with the information on the corresponding SDS, if any. The workplace label must appear in sharp contrast with any other information on the container of the hazardous product. The workplace label must be prominently displayed on a surface that is visible under normal conditions of use of the product.

2) The employer (supervisor or PI) must ensure that containers have label disclosing up-to-date information when being used. In that context, an employer must, as soon as possible after being informed by a supplier of significant new data regarding a hazardous product or on becoming otherwise aware of such data, make the necessary changes to provide the users with the accurate information.

Workplace labels can be prepared such that it is most appropriate for the workplace, including language requirements. At Concordia University, English is required but bilingual (English/French) is recommended.

5. How to retrieve the information that must be displayed on a workplace label?

The SDS constitutes the reference document from which required information that must be disclosed on a workplace label is extracted. The employer must ensure the SDSs are available for all hazardous products in the workplace, either as a hardcopy or the electronic access (or other technology alternatives) towards paper copies. The worker must be capable of rapidly accessing a hardcopy of the SDS (e.g. ensure accessibility to a computer and printer).

Resources for locating an SDS:

- a) The manufacturer, supplier, or vendor
- b) ChemWatch SDS Database that can be accessed from the EHS website: concordia.ca/ehs
- c) The Canadian Centre for Occupational Health and Safety (CCOHS) website: ccohs.ca/products/msds/
- d) The *Répertoire Toxicologique de la CNESST* (in French only): www.csst.qc.ca
- e) The Public Health Agency of Canada (PHAC) for Pathogens: phac-aspc.gc.ca/lab-bio/res/psds-ftss/index-eng.php

At any time, EHS and FAS Central Stores (Loyola Chemical Store) personnel are available to provide assistance in retrieving the necessary information for creating a workplace label.

A user guide (EHS-DOC-207) will be attached to these guidelines. It will provide with a step-by-step procedure to produce compliant workplace labels and with directly accessible compliant information, including Hazard and Precautionary statements, WHMIS 2015 pictograms and some examples of PPE symbols. The person responsible for workplace labels production will be able to copy/paste the information from EHS-DOC-207.

6. Concordia Workplace Label Requirements

6.1. Teaching Laboratories (All Faculties)

In Concordia's Teaching Laboratories, all hazardous products used, handled, or stored must have a WHMIS 2015 compliant label, as listed in **Section 3**. The permitted **Exemptions** do apply.

6.1.1. Squeeze Bottles

A workplace label must be displayed on squeeze bottles used for common chemicals, including but not limited to Acetone, Ethyl Acetate, Toluene, Dichloromethane, Ethanol, Methanol, and Sodium Hypochlorite.

Some squeeze bottles (available from Fisher Scientific^b for instance) have already a pre-printed labeling including the chemical name and formula, pictogram(s) and signal word, NFPA diamond, health hazard, CAS number, and suggested Protective Personal Equipment (**Figure 4**). For these specific containers, while "SDS availability" is not mentioned, the workplace label will not be considered necessary.

^b fishersci.com/shop/products/fisherbrand-ghs-labeled-right-to-know-safety-vented-wash-bottles/p-4953403 and fishersci.com/shop/products/bel-art-scienceware-right-to-know-safety-vented-wash-bottles-ghs-labeling-22/p-4819701



Figure 4. Example of a squeeze bottle for Acetone: front (a) and back (b) for which workplace labeling is not necessary.^b

Squeeze bottles that:

- Contain a hazardous product, AND
 - Only display the name of the product or display the name of the product along with the National Fire Protection Association (NFPA) four-color diamond,
- must** be labeled with a compliant workplace label.

6.2. Research Laboratories (All Faculties)

In Concordia's Research Laboratories, all hazardous products used, handled, or stored, must have a WHMIS 2015 compliant label, for situations 1, 2 and 3 listed in **Section 3**. The permitted **Exemptions** do apply.

Regarding situation 4, the application of a WHMIS 2015 compliant workplace label will only be mandatory **if** the supplier label affixed on the container is a **pre-WHMIS 1988 workplace label** or **any other label that does not comply with WHMIS regulations**.

Example: A chemical container with an old European label (orange square-shaped pictograms and related indications of danger) must be re-labeled.

In addition, all containers that do not show any evident WHMIS elements must be re-labeled.

6.2.1. Squeeze Bottles

The requirements for the squeeze bottles mentioned in Section 6.1.1 must apply when this type of container is present in Research Laboratories.

6.2.2. Distilled Solvents

Flasks or bottles containing freshly distilled solvents or solvents dispensed from a solvent purification system, and typically containing molecular sieves or other dessicants must show a workplace label permanently, along with the name of the dessicant used.

6.3. Studios and Workshops

In Studios and Workshops, all hazardous products that are used, handled, and stored, must have a WHMIS 2015 compliant label, for situations 1, 2 and 3 listed in **Section 3**. The permitted **Exemptions** do apply.

Regarding situation 4, the application of a WHMIS 2015 complaint workplace label will only be mandatory **if** the supplier label affixed on the container is a **pre-WHMIS 1988 workplace label** or **any other label that does not comply with WHMIS regulations**.

6.3.1. Consumer products

Products covered by other federal legislations are exempt from federal WHMIS requirements for supplier labels. Among them, some consumer products (e.g., paints, aerosols, linseed oil, varnishes, glues) that are covered under the *Consumer Chemicals and Containers Regulations* (CCCR) do not have to be re-labeled in the workplace as long as they are used in quantities and packaging that is normally available to the public. Nevertheless, in the event that consumer products are decanted or repackaged for use in Concordia's workplaces, the requirements for workplace labeling mentioned in **Section 3** must apply. When producing a hazardous product (e.g., a glaze, a paint mixture) that will be stocked in a container on-site during a long period of time, WHMIS-compliant workplace label is required. It will have to mention the hazards related to the different ingredients.

6.4. Facilities Management Workplaces

In Concordia's Facilities Management workplaces (e.g., shops, mechanical rooms), all hazardous products used, handled, or stored must have a WHMIS 2015 compliant label, as listed in **Section 3**. The permitted **Exemptions** do apply.

6.5. FAS Central Stores

In the FAS Central Stores, all hazardous products used, handled, stored, distributed, sold or shipped must have a WHMIS 2015 compliant label, as listed in **Section 3**. Only the **Exemption 3** (size of containers) can apply.

7. Where to get workplace labels?

The FAS Central Stores (Loyola - lyudmila.anohina@concordia.ca or ext. 3369) or EHS (ehs@concordia.ca or ext. 4877) personnel must be contacted prior to creating a workplace label, in order

to verify if it already exists. Please consult EHS-DOC-207 (*Guide to Creating Workplace Labels*) to create a workplace label.

8. Workplace label format

EHS and the FAS Central Stores can make labels in three (3) different formats: **1.5×2.5 in**, **2.5×4 in**, and **4×6 in**.

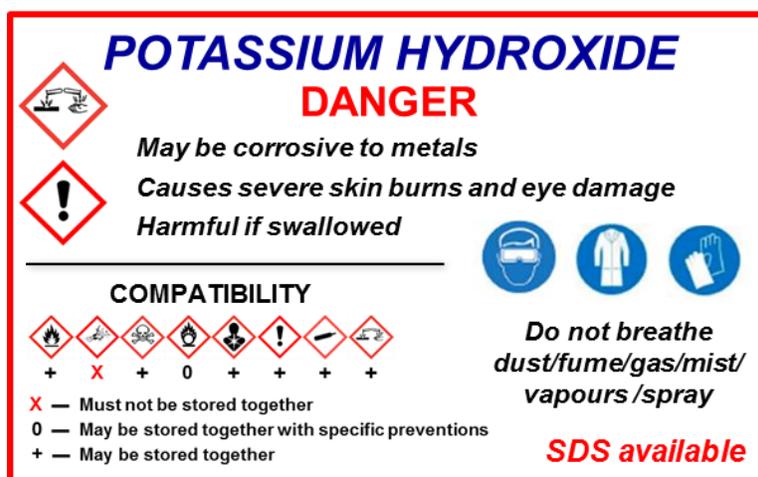
These synthetic polypropylene self-adhesive labels are non-tearable and provide very good solvent and corrosion resistance. The pigment-based ink that is applied offers a long-lasting presence of the information in comparison to regular inkjet, which often results in leaked or defaced writings. While the mention of the three (3) mandatory elements is necessary, the presence of additional information mentioned in **Section 4** will be dependent on the size of the label and thus on the size of the container.

Home-made workplace labels with various suitable dimensions can also be created and properly taped on the container, prominently displayed on a surface that is visible under normal conditions of use of the product.

Below are shown four (4) examples of workplace labels based on their size:



a) Format: 1.5×2.5 in



b) Format: 2.5×4 in

| | | | |
|---|---|--|---|
|  |  | POTASSIUM HYDROXIDE |  |
| | | CAS Number: 1310-58-3 | |
| DANGER | | | DANGER |
| <ul style="list-style-type: none"> • May be corrosive to metals • Causes severe skin burns and eye damage • Harmful if swallowed |  | <ul style="list-style-type: none"> • Peut être corrosif pour les métaux • Provoque des brûlures de la peau et des lésions oculaires graves • Nocif en cas d'ingestion | |
| Prevention | | | Prévention |
| <i>Do not breath dust/fume/gas/mist/vapours/spray</i> |  | <i>Ne pas respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols</i> | |
| Response | | | Réponse |
| <i>If SWALLOWED: Rinse mouth. Do NOT induce vomitting</i> | | <i>EN CAS D'INGESTION: rincer la bouche. NE PAS faire vomir</i> | |
| <i>If ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water</i> | | <i>EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): enlever immédiatement les vêtements contaminés. Rincer la peau à l'eau</i> | |
| SDS available | | FDS disponible | |

c) Format: 4x6 in (landscape layout)

POTASSIUM HYDROXIDE
CAS Number: 1310-58-3

DANGER

- May be corrosive to metals
- Causes severe skin burns and eye damage
- Harmful if swallowed

Prevention
Do not breath dust/fume/gas/mist/vapours /spray

Response
If SWALLOWED: Rinse mouth. Do NOT induce vomitting
If ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water
If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do




COMPATIBILITY



+ X + 0 + + + +

X — Must not be stored together
0 — May be stored together with specific preventions
+ — May be stored together

SDS available

d) Format: 4×6 in (portrait layout)

9. References

- [1]. <https://www.ccohs.ca/products/publications/WHMISafterGHS.pdf>
- [2]. <http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/S-2.1>
- [3]. <http://legisquebec.gouv.qc.ca/en/ShowDoc/cr/S-2.1,%20r.%208.1>

If you have any concerns about workplace labels at Concordia University, please email EHS at ehs@concordia.ca.

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