

Chemical Handling

Safe At Work Ontario

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Disclaimer: This resource has been prepared to help the workplace parties understand some of their obligations under the Occupational Health and Safety Act (OHSA) and regulations. It is not legal advice. It is not intended to replace the OHSA or the regulations. [For further information please see full disclaimer.](#)

Overview

Hazards involving chemical handling can lead to serious worker injuries, occupational diseases and even death. In particular, workers may be at risk of injuries from chemical flammability/reactivity, contact with corrosive chemicals, asphyxiation hazards or damage to body organs or systems. Workers are at risk of developing occupational diseases, such as contact dermatitis, occupational asthma and occupational cancers.

Proper chemical handling prevents these types of injuries and occupational diseases.

The handling and storing of chemicals is vital to industry. From 2005 to 2014, the Workplace Safety and Insurance Board (WSIB) recorded 16,207 chemical-related lost-time injuries (LTIs) from exposure to caustic, noxious or allergenic substances.

Employers are responsible for protecting workers from chemical handling hazards.

Some of the hazards workers could be exposed to include:

- Acute or chronic exposure to chemical contaminants through inhalation, ingestion and skin contact resulting in injury to organs or body systems (e.g. lung damage following acute ammonia exposure; Hard Metal Disease following chronic cobalt exposure)
- Burns and other injuries or death related to chemical flammability and explosion (e.g. dispensing of flammable chemicals without grounding and bonding, hot work on chemical containers without proper cleaning)
- Asphyxiation hazards due to exposure to gases that displace oxygen (simple asphyxiants) or exposure to a chemical that affects the ability of the body to use oxygen (e.g. hydrogen cyanide, carbon monoxide)
- Burns to eyes and skin through contact with acidic or caustic chemicals
- Occupational cancers as the result of long-term chemical exposures (e.g. asbestos, benzene)

- Occupational dermatitis (e.g. metal working fluids)
- Occupational asthma (e.g. isocyanates)

Some general duties of workplace parties

Employers

Employers are required to provide supervision, information and instruction to all workers, including new and young workers, on how to protect their health and safety in the workplace. This includes information about safe work policies, measures and procedures specific to the workplace and the duties the worker will perform.

It is recommended employers carry out any instruction and provide information to new and young workers in late spring, a common time of year for young people to enter the workforce.

The following are some examples of employers' duties under the [Occupational Health and Safety Act](#) (OHSA).

Employers are required to:

- take every reasonable precaution in the circumstances for the protection of workers [OHSA s. 25(2)(h)]
- ensure equipment, materials and protective devices that are provided are maintained in good condition [OHSA s. 25(1)(b)]
- provide workers with information, instruction and supervision [OHSA s. 25(2)(a)]
- acquaint a worker or a person in authority over a worker with any hazard in the work and in the handling, storage, use, disposal and transport of any article, device, equipment or a biological, chemical or physical agent [OHSA s. 25(2)(d)]
- prepare and review, at least annually, a written occupational health and safety policy, and develop and maintain a program to implement that policy if there are more than five workers in the workplace [OHSA s. 25(2)(j)]
- post a copy of the OHSA in the workplace [OHSA s. 25(2)(k)]

Supervisors

Supervisors are required to:

- ensure workers work in compliance with the OHSA and its regulations [OHSA s. 27(1)(a)]
- ensure any equipment, protective device or clothing required by the employer is used or worn by workers [OHSA s. 27(1)(b)]

- advise workers of any potential or actual health or safety dangers known by the supervisor
[OHS s. 27(2)(a)]
- where prescribed, provide workers with written instructions about measures and procedures to be taken for the workers' protection [OHS s. 27(2)(b)]
- take every precaution reasonable in the circumstances for the protection of workers
[OHS s. 27(2)(c)]

Workers

Workers are required to:

- work in compliance with the OHS and its regulations [OHS s. 28(1)(a)]
- use or wear equipment, protective devices or clothing required by the employer
[OHS s. 28(1)(b)]
- report to employer or supervisor the absence of or defect in any equipment or any protective device of which the worker is aware [OHS s. 28(1)(c)]
- report any known workplace hazards or OHS violations to the supervisor or employer
[OHS s. 28(1)(d)]
- be aware of their rights under the Occupational Health and Safety Act, such as the right to refuse unsafe work, except in specified circumstances [OHS s. 43]

Protecting workers

Workplace parties should all work together to address chemical handling hazards in their workplace. This includes employers, supervisors, workers, Joint Health and Safety Committees (JHSCs) and health and safety representatives.

The employer is required to ensure basic mandatory health and safety awareness training is completed by all supervisors and workers.

For more information on legal responsibilities please visit the Occupational Health and Safety Act.

More information

- [Health and Safety Ontario](#)
- [Occupational Health and Safety Act](#)
- [Topics and Publications: Health and Safety](#)

Ministry of Labour Health & Safety Contact Centre

Call toll-free 1-877-202-0008 anytime to report workplace health and safety incidents.
Call 8:30 a.m. to 5 p.m., Monday to Friday, for general inquiries about workplace health and safety.

Always call 911 in an emergency.