5.48 Exposure limits

Except as otherwise determined by the Board, the employer must ensure that no worker is exposed to a substance that exceeds the ceiling limit, short-term exposure limit, or 8-hour TWA limit prescribed by ACGIH.

[Enacted by B.C. Reg. 315/2003, effective October 29, 2003.]

5.49 Excursion limits

If a substance referred to under section 5.48 is provided only with an 8-hour TWA limit, the employer must, in addition to the requirement of section 5.48, ensure that a worker's exposure to the substance does not exceed

(a) three times the 8-hour TWA limit for more than a total of 30 minutes during the work period, and

(b) five times the 8-hour TWA limit at any time.

[Enacted by B.C. Reg. 315/2003, effective October 29, 2003.]

5.50 Extended work periods

(1) If the work period is more than 8 hours in a 24 hour day, the 8-hour TWA limit must be reduced by multiplying the TWA limit by the following factors:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Length of work period (in hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.7</td>
<td>more than 8, but not more than 10</td>
</tr>
<tr>
<td>0.5</td>
<td>more than 10, but not more than 12</td>
</tr>
<tr>
<td>0.25</td>
<td>more than 12, but not more than 16</td>
</tr>
<tr>
<td>0.1</td>
<td>more than 16</td>
</tr>
</tbody>
</table>

(2) Repealed. [B.C. Reg. 188/2011, effective February 1, 2012.]

[Amended by B.C. Reg. 315/2003, effective October 29, 2003.]
[Amended by B.C. Reg. 188/2011, effective February 1, 2012.]

5.51 Additive effects

If there is exposure to a mixture of 2 or more substances with established exposure limits which exhibit similar toxicological effects, the effects of such exposure must be considered additive unless it is known otherwise, and the additive exposure must not exceed 100% when calculated as follows:

\[ AE = \%EL_1 + \%EL_2 + \ldots + \%EL_n \]

where

(a) \( AE \) is the calculated additive exposure to the mixture,

(b) \( \%EL_1 \) is the measured exposure to component 1 of the mixture expressed as a percentage of its exposure limit,

(c) \( \%EL_2 \) is the measured exposure to component 2 of the mixture expressed as a percentage of its exposure limit, and

(d) \( \%EL_n \) is the measured exposure to any additional components of the mixture expressed as a percentage of their respective exposure limits.

[Enacted by B.C. Reg. 315/2003, effective October 29, 2003.]

5.52 Skin designation

If skin absorption may contribute to the overall exposure, effective measures must be taken to limit exposure by this route.

Note: Substances which can contribute to exposure by skin absorption are identified with a "Skin" notation by the ACGIH.

5.53 Workplace monitoring
(1) If a worker is or may be exposed to a hazardous substance, the employer must ensure that

(a) a walkthrough survey is conducted to assess the potential for overexposure taking into account all routes of exposure, including inhalation, ingestion, and skin contact, and

(b) reassessment is conducted when there is a change in work conditions which may increase the exposure, such as a change in production rate, process or equipment.

(2) If the walkthrough survey required by subsection (1) reveals that a worker may be at risk of overexposure to an airborne contaminant, the employer must ensure that air sampling is conducted to assess the potential for overexposure.

(3) Additional workplace monitoring to reliably determine worker exposure is required if

(a) the assessment under subsection (2) reveals that a worker may be exposed to an air contaminant in excess of 50% of its exposure limit, or

(b) measurement is not possible at 50% of the applicable exposure limit.

(4) Workplace exposure monitoring and assessment must be conducted using occupational hygiene methods acceptable to the Board.

(5) The results of workplace exposure monitoring and assessment, or a summary of the results, must be provided to workers at their request without undue delay.

Note: See also section 5.2 which provides general requirements to prevent overexposure by any route.

5.54 Exposure control plan

(1) An exposure control plan must be implemented when

(a) exposure monitoring under section 5.53(3) indicates that a worker is or may be exposed to an air contaminant in excess of 50% of its exposure limit,

(b) measurement is not possible at 50% of the applicable exposure limit, or

(c) otherwise required by this Regulation.

(2) The exposure control plan must incorporate the following elements:

(a) a statement of purpose and responsibilities;

(b) risk identification, assessment and control;

(c) education and training;

(d) written work procedures, when required;

(e) hygiene facilities and decontamination procedures, when required;

(f) health monitoring, when required;

(g) documentation, when required.

(3) The plan must be reviewed at least annually and updated as necessary by the employer, in consultation with the joint committee or the worker health and safety representative, as applicable.

5.55 Type of controls

(1) If there is a risk to a worker from exposure to a hazardous substance by any route of exposure, the employer must eliminate the exposure, or otherwise control it below harmful levels and below the applicable exposure limit established under section 5.48 by

(a) substitution,

(b) engineering control,

(c) administrative control, or

(d) personal protective equipment.

(2) When selecting a suitable substitute, the employer must ensure that the hazards of the substitute are known, and that the risk to workers is reduced by its use.
The use of personal protective equipment as the primary means to control exposure is permitted only when
(a) substitution, or engineering or administrative controls are not practicable, or
(b) additional protection is required because engineering or administrative controls are insufficient to reduce exposure below the applicable exposure limits, or
(c) the exposure results from temporary or emergency conditions only.

[Amended by B.C. Reg. 315/2003, effective October 29, 2003.]

5.56 Oxygen deficiency

The airborne concentration of any gas or vapour must be controlled so that a worker is not exposed to an oxygen deficient atmosphere, and there is no other hazard, such as fire or explosion.

Note: Examples of gases that can cause an oxygen deficient atmosphere include:

<table>
<thead>
<tr>
<th>acetylene</th>
<th>ethylene</th>
<th>methane</th>
<th>propane</th>
</tr>
</thead>
<tbody>
<tr>
<td>argon</td>
<td>helium</td>
<td>neon</td>
<td>propylene</td>
</tr>
<tr>
<td>ethane</td>
<td>hydrogen</td>
<td>nitrogen</td>
<td></td>
</tr>
</tbody>
</table>

5.57 Designated substances

(1) If a substance identified as any of the following is present in the workplace, the employer must replace it, if practicable, with a material which reduces the risk to workers:
(a) ACGIH A1 or A2, or IARC 1, 2A or 2B carcinogen;
(b) ACGIH reproductive toxin;
(c) ACGIH sensitizer;
(d) ACGIH L endnote.

(2) If it is not practicable to substitute a material which reduces the risk to workers, in accordance with subsection (1), the employer must implement an exposure control plan to maintain workers' exposure as low as reasonably achievable below the exposure limit established under section 5.48.

(3) The exposure control plan must meet the requirements of section 5.54.

[Enacted by B.C. Reg. 315/2003, effective October 29, 2003.]
[Amended by B.C. Reg. 258/2008, effective January 1, 2009.]

5.58 Protective policy

(1) At any worksite where a worker is exposed to a substance which is identified in section 5.57(1) as an ACGIH reproductive toxin or an ACGIH sensitizer, the employer must develop policy and procedures appropriate to the risk, which may include protective reassignment.

(2) The policy and procedures required by subsection (1) must
(a) inform workers about the reproductive toxin and identify ways to minimize exposure to the toxin for a worker who has advised the employer of pregnancy or intent to conceive a child, and
(b) identify ways to eliminate or minimize exposure to a sensitizer for a worker who is or may be sensitized to that substance.

[Amended by B.C. Reg. 315/2003, effective October 29, 2003.]
[Amended by B.C. Reg. 258/2008, effective January 1, 2009.]

5.59 Investigating symptoms

(1) If a worker exhibits signs or reports symptoms of overexposure to a hazardous substance present in the workplace, the employer must investigate and assess the potential for exposure.

(2) If the assessment demonstrates that the signs or symptoms can be caused by exposure to a hazardous substance that is present in the workplace, further investigation must be conducted, in consultation with the joint committee or the worker health and safety representative, as
applicable, to address and resolve the worker's concern.

(3) Records of the investigation required under subsection (2) must be made available to workers, and maintained by the employer for a minimum of 10 years.

5.60 Application

Sections 5.61 to 5.71 apply to ventilation used for the control of air contaminants in the workplace, except for heating, ventilation and air conditioning (HVAC) systems in buildings, which are subject to requirements on indoor air quality in Part 4 (General Conditions).

5.61 Engineering principles

A ventilation system for controlling airborne contaminants in the workplace must be designed, installed and maintained using established engineering principles.

Note: A useful guide is *Industrial Ventilation — A Manual of Recommended Practice* published by the American Conference of Governmental Industrial Hygienists.

5.62 Submitting plans

The employer or the employer's agent must submit to the Board drawings and specifications for an existing or proposed ventilation system if requested by the Board.

5.63 Building modifications

The owner of a building must permit an employer to install an exhaust ventilation and makeup air system to meet the requirements of this Part for controlling harmful air contaminants in the workplace, provided that all such work is subject to the approval of the owner acting reasonably.

5.64 Controlling air contaminants

(1) If ventilation is used as an engineering control, an air contaminant must be controlled at the source by an effective local exhaust ventilation system.

(2) If local exhaust ventilation is not practicable, general (dilution) ventilation, or a combination of general and local exhaust ventilation must be used.

5.65 Worker location

A local exhaust ventilation system must be designed so that under normal work procedures a worker's breathing zone is not located between the source of contamination and the exhaust uptake.

5.66 Ventilation openings

A ventilation system must not be obstructed by material or equipment placed in front of the ventilation openings.

5.67 Effectiveness

(1) An exhaust ventilation system used to control air contaminants in the workplace must remain in operation until the work process is completed and the air contaminants generated have been removed so as not to be a hazard to workers.

(2) An exhaust ventilation system used to control air contaminants in the workplace must be regularly inspected and monitored to ensure that it remains effective.

5.68 Failure warning

If failure of an exhaust ventilation system would result in a hazard that is not readily apparent to affected workers, the system must be equipped with a device or other means to warn those workers in the event of system failure.

5.69 Makeup air

(1) An adequate supply of makeup air must be provided as necessary to

(a) maintain the effectiveness of an exhaust ventilation system, or
(b) prevent an air contaminant being drawn into the work space from another work area.

(2) A makeup air supply must not expose a worker to uncomfortable temperatures or drafts.

5.70 Discharged air

(1) The use of a ventilation system designed to recirculate contaminants into the work area is restricted by the provisions of Table 5-1.

(2) A ventilation system that discharges air from the work area must be designed to minimize the likelihood of exposing any worker at a workplace, including an adjacent workplace,

(a) to an air contaminant in a concentration which exceeds either 10% of its applicable exposure limit in this Part or an acceptable ambient air quality standard established by an authority having jurisdiction over environmental air standards, whichever is greater, and

(b) if practicable, to an objectionable odour.

Note: Contaminated exhaust discharged to the outdoor air is subject to the applicable federal, provincial and municipal requirements.

Table 5-1: Recirculation of discharged air

<table>
<thead>
<tr>
<th>Recirculation permitted without written approval</th>
<th>Recirculation only with written approval by the Board</th>
<th>No recirculation permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>A nuisance particulate with an 8-hour TWA limit of at least 10 mg/m³, provided that its concentration in the discharged air is less than 10% of the TWA limit.</td>
<td>Allergenic wood dust.</td>
<td>A substance identified under section 5.57(1), unless otherwise identified in this Table.</td>
</tr>
<tr>
<td>Asbestos fibre or other particulate, except a biological contaminant, provided that it is exhausted from a portable vacuum cleaner or bench-top containment unit, fitted with an effective HEPA filter.</td>
<td>Non-allergenic hardwood dust.</td>
<td></td>
</tr>
<tr>
<td>A welding fume (including its components identified under section 5.57(1)) exhausted from a portable welding fume extractor fitted with an air cleaner, provided that its concentration in the discharged air is less than 10% of the applicable exposure limit.</td>
<td>Any contaminant not otherwise listed in this Table.</td>
<td></td>
</tr>
<tr>
<td>A biological contaminant discharged from a biological safety cabinet that is installed and operated in accordance with the requirements in Part 30 (Laboratories).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-allergenic softwood dust, provided that its concentration in the discharged air is less than 10% of the 8-hour TWA limit.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Amended by B.C. Reg. 315/2003, effective October 29, 2003.]

5.71 Combustible or flammable air contaminants

(1) If an operation or work process produces a combustible or flammable air contaminant in concentrations that may present a risk of fire or explosion, the employer must provide a separate exhaust ventilation system for the operation or work process.

(2) If electrical equipment used in an exhaust ventilation system required by subsection (1) contacts the air stream, the employer must ensure that the electrical equipment is permitted under the B.C. Electrical Code

(a) for use in that location, and

(b) for the specific air contaminants that are or may be present.

(3) A dust collector having an internal volume greater than 0.6 m³ (20 ft³) and being used to control combustible dusts must be located and constructed so that no worker will be endangered in the event of an explosion inside the collector.

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]
[Amended by B.C. Reg. 9/2017, effective May 1, 2017.]

5.85 Where required
The employer must ensure that appropriate emergency washing facilities are provided within a work area where a worker’s eyes or skin may be exposed to harmful or corrosive materials or other materials which may burn or irritate.

5.86 Water supply

(1) For a plumbed emergency eyewash facility, the employer must ensure that only a potable water supply is used.

(2) For a portable (non-plumbed) eyewash unit, the employer must ensure that only potable water or an isotonic saline flushing solution is used.

5.87 Access

The employer must ensure that access to emergency eyewash and shower facilities is not blocked by material or equipment.

5.88 Risk assessment

The employer must ensure that the selection of emergency washing facilities is based upon an assessment of the risks present in the workplace, according to Table 5-2.

5.89 Equipment required

(1) The employer must ensure, except where it is not practicable to provide a permanent water supply, such as at a remote or transient worksite, that emergency eyewash and shower facilities are provided and located as specified in Table 5-3.

(2) Requirements for tempered water in Table 5-3 do not apply if the advice of a medical professional indicates that tempered washing would increase the risk of injury in a particular application.

5.90 Transient worksites

(1) The employer must ensure that portable self-contained units are provided, where it is not practicable to provide a permanent water supply at transient worksites such as construction sites.

(2) The employer must ensure that portable self-contained units at these transient worksites are capable of delivering a minimum flush duration of 15 minutes (or more if required by the nature of the material) if there is a high or a moderate risk of injury to the eyes or skin.

5.91 Remote worksites

The employer must ensure that effective means to flush the eyes or skin, based upon an assessment of the risk, is reasonably available at a remote worksite if it is not practicable to provide a portable self-contained unit.

5.92 Signs

The employer must ensure that emergency eyewash and shower facilities are clearly identified by signs which indicate their location and provide clear directions for their use.

5.93 Testing

(1) Repealed. [B.C. Reg. 312/2003, effective October 29, 2003.]

(2) The employer must ensure that a plumbed emergency eyewash or shower facility is full flow tested at least once per month, for a sufficient length of time to completely flush the branch of the water line supplying the eyewash.

(3) Repealed. [B.C. Reg. 312/2003, effective October 29, 2003.]

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

5.94 Training

The employer must ensure that workers who are required to use emergency eyewash and shower facilities are adequately trained in their location and proper use.

5.95 Protection from freezing

The employer must ensure that an emergency eyewash or shower facility and the piping from the supply are protected against freezing.
### Table 5-2: Risk assessment

<table>
<thead>
<tr>
<th>Risk level</th>
<th>Description of the workplace</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>High risk</td>
<td>Workplaces at which corrosive chemicals or other materials are used in a manner, concentration and quantity which present a risk of irreversible tissue damage to the eyes or skin, or of serious illness resulting from rapid absorption of a toxic substance through the eyes or skin, or where the work activity presents a risk of ignition of the clothing.</td>
<td>Maintenance of ammonia refrigeration equipment or chlorine bleaching or disinfection equipment, handling corrosive materials such as corrosive cleaning products or chemical reagents where there is a high risk of skin or eye contact, filling chemical storage batteries. The following Health Hazard Classes and Categories in the HPR are included: (a) skin corrosion (1A), (1B), (1C); (b) serious eye damage (1).</td>
</tr>
<tr>
<td>Moderate risk</td>
<td>Workplaces at which chemicals or other materials are used in a manner, concentration and quantity which present a risk of irritation or other reversible harm to the eyes or skin, or of illness resulting from absorption of a toxic substance through the eyes or skin.</td>
<td>Spraying automotive paints and finishes, operating solvent degreasing equipment, handling irritant materials such as cleaning products or chemical reagents where there is a moderate risk of skin or eye contact, handling dry-cleaning solvents and spotting agents. The following Health Hazard Classes and Categories in the HPR are included: (a) eye irritation (2A), (2B); (b) skin irritation (2).</td>
</tr>
<tr>
<td>Low risk</td>
<td>Workplaces at which chemicals or other materials are used in a manner and quantity which present a risk of mild eye or skin irritation.</td>
<td>Using detergents, silicone-based mold-release agents, some hair-dressing solutions, rosin-cored solders, welding and grinding, working in dusty areas.</td>
</tr>
</tbody>
</table>

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

### Table 5-3: Provision and location of emergency washing equipment

<table>
<thead>
<tr>
<th></th>
<th>High risk</th>
<th>Moderate risk</th>
<th>Low risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye Equipment</strong></td>
<td>Tempered, continuous flow eyewash facility with a minimum duration of 15 minutes (or more if required by the nature of the material).</td>
<td>Tempered, continuous flow eyewash facility with a minimum duration of 15 minutes.</td>
<td>Effective means to flush the eyes.</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Within 5 seconds walking distance of the hazard area, but no further than 6 m (20 ft). For high risk corrosive gases such as ammonia or chlorine, the facilities must not be located in the gas storage or use area, but rather, adjacent to it.</td>
<td>Within 10 seconds walking distance of the hazard area, but no further than 30 m (100 ft). May be located further than 30 m, provided that (a) a supplementary eyewash facility such as a personal eyewash unit or a non-tempered drench hose is located within 10 seconds walking distance of the hazard area but no further than 30 m, and (b) first aid services are maintained to start treatment of an affected worker within 5 minutes of the contact.</td>
<td>Within 10 seconds walking distance of the hazard area but no further than 30 m (100 ft).</td>
</tr>
<tr>
<td><strong>Skin Equipment</strong></td>
<td>Tempered, continuous flow emergency shower facility with a minimum duration of 15 minutes (or more if required by the nature of the material).</td>
<td>Tempered, continuous flow emergency shower facility with a minimum duration of 15 minutes.</td>
<td>Emergency flushing equipment, such</td>
</tr>
</tbody>
</table>
5.96 Valve operation

The employer must ensure that a valve which activates an emergency eyewash or shower facility is designed so that, once activated, the flow of water or flushing solution will continue without requiring the use of the operator's hands.

5.20 Condition of containers

The container of a hazardous substance must be designed, constructed and maintained in good condition to securely contain the substance.

5.21 Material integrity

Any material used to contain, transfer or convey a hazardous substance must be reasonably resistant to the substance and to any other substance to which it may be exposed.

5.22 Covers

If an open container of a hazardous substance could pose a hazard, the container must be kept sealed or covered when not in use.

5.23 Permitted quantities

(1) The amount of a hazardous substance in a work area must not exceed the quantity reasonably needed for work in progress, normally in one work shift.

(2) Bulk or reserve quantities must be stored in a designated area separate from the work area.

5.24 Incompatible substances

Substances which are incompatible must not be stored in a manner that would allow them to mix in the event of container leakage, breakage or other such circumstance.

5.25 Storage practices

A hazardous substance must be stored in a designated area, in a manner which ensures that it will not readily fall, become dislodged, suffer damage, or be exposed to conditions of extreme temperature.

5.26 Storage area

The designated storage area for a hazardous substance must be

(a) designed and constructed to provide for the safe containment of the contents,

(b) clearly identified by signs, placards or similar means,

(c) designed and maintained to allow the safe movement of workers, equipment and material,

(d) provided with adequate ventilation and lighting, and

| Location | Same location criteria as for high risk eyewash facility except that the shower may be located further than 6 m if (a) a supplementary emergency washing facility such as a non-tempered drench hose is located within 5 seconds walking distance of the hazard area but no further than 6 m, and (b) a tempered shower facility is available within the building to start emergency washing within 5 minutes of the contact. | Same location criteria as for moderate risk eyewash facility except that the supplementary emergency washing facility for locations beyond 30m must be a unit such as non-tempered drench hose. | Same location criteria as for low risk eyewash facility. |
(e) in a location not normally occupied by workers, and not in a location such as a lunchroom, eating area, change room, clothing storage locker or passenger compartment of a vehicle.

5.1 Definitions
5.1.1 Designation as hazardous substances
5.2 General information requirement

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

5.3 Application
5.4 Prohibition
5.5 WHMIS program
5.6 Worker education
5.7 Worker training
5.8 Supplier label
5.9 Workplace label for employer-produced products
5.10 Workplace label for decanted products
5.11 Piping systems and vessels
5.12 Placard identifiers
5.13 Laboratory label
5.14 Supplier SDS
5.15 Employer SDS
5.16 Availability of an SDS
5.16.1 Availability of toxicological data
5.17 Deletions from an SDS
5.18 Confidential business information and claims for exemption under the HMIRA
5.19 Claims under the HMIR Act [Repealed]

CONTAINERS AND STORAGE

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5.21 Material integrity
5.22 Covers
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5.24 Incompatible substances
5.25 Storage practices
5.26 Storage area

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5.31 Flammable gas or vapour
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5.33 Permitted quantities
5.34 Combustible materials
5.35 Cabinet vent

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5.39 Cylinder markings
5.40 Cylinder valves
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5.43 Empty cylinders
5.44 Acetylene cylinders
5.45 Restriction on use of copper
5.46 Restriction on use of oxygen
CONTROLLING EXPOSURE

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5.61 Engineering principles
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5.64 Controlling air contaminants
5.65 Worker location
5.66 Ventilation openings
5.67 Effectiveness
5.68 Failure warning
5.69 Makeup air
5.70 Discharged air

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5.72 Venting outdoors
5.73 Indoor operation
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HAZARDOUS WASTES AND EMISSIONS

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5.77 Placard
5.78 SDS
5.79 Sale or disposal
5.80 Sharp-edged waste
5.81 Combustible dust

PERSONAL HYGIENE

5.82 Employer's responsibility
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5.85 Where required
5.86 Water supply
5.87 Access
5.88 Risk assessment
5.89 Equipment required
5.90 Transient worksites
5.91 Remote worksites
EMERGENCY PROCEDURES

5.82 Employer’s responsibility

(1) If a work process may result in harm to a worker from contamination of the worker’s skin or clothing by a hazardous substance, the employer must

(a) supply appropriate protective clothing,

(b) launder or dispose of the protective clothing on a regular basis, according to the hazard,

(c) provide adequate wash facilities, and

(d) allow time for washing before each work break.

(2) If work processes involving substances such as lead, mercury, asbestos, silica or pesticides are high hazard, the employer must also ensure that workers are provided with

(a) clothing lockers in separate rooms for street clothing and work clothing,

(b) heated shower facilities between the rooms, and

(c) time for showering and clothing change before the end of the work shift.

(3) In a remote location where provision of change rooms and shower facilities is not practicable, separate clothing storage and adequate washing facilities must be provided.

5.83 Worker’s responsibility

A worker engaged in a work process described in section 5.82 must

(a) wear the supplied protective clothing,

(b) wash effectively before each work break and the end of the work shift, and

(c) shower at the end of the work shift, if required by the hazard.

5.84 Prohibition

Eating, drinking, smoking, applying cosmetics or storing food is prohibited in any work area where a work process described in section 5.82 takes place.

5.76 Label

If an employer produces, stores, handles or disposes of a hazardous waste at a workplace, the employer must, except as provided in section 5.79, ensure that a workplace label is applied to each container of hazardous waste, or the information mandated by the Hazardous Products Regulations is provided, if applicable.
5.77 Placard

(1) An employer may identify a hazardous waste which is not in a container by posting a placard in a workplace which
(a) discloses the information required for a workplace label, and
(b) is of a size and in locations so that the information is conspicuous and clearly legible to workers.

(2) If a fugitive emission that contains a hazardous product is produced or disposed of, the employer must post a placard which complies with
subsection (1), or ensure equivalent information is provided to workers through identification and training.

5.78 SDS

If a hazardous waste or a fugitive emission that contains a hazardous product is produced, stored, handled or disposed of in the workplace, the
employer must prepare an SDS for the hazardous waste or fugitive emission unless a hazardous waste profile sheet or its equivalent which
addresses composition, hazards and safe measures for the waste or fugitive emission is readily available.

5.79 Sale or disposal

An employer must not sell or dispose of a hazardous waste intended for use, handling, storage or disposal in a workplace unless
(a) the hazardous waste or container in which the waste is packaged has a label or placard which complies with sections 5.76 and 5.77, and
(b) at the time of sale or disposal the employer transmits to the receiver an SDS for the hazardous products in the hazardous waste or a hazardous
waste profile sheet which addresses the composition, hazards and safe measures for the hazardous waste.

5.80 Sharp-edged waste

Broken glass, metal or similar rigid, sharp-edged waste must be disposed of in separate, puncture proof waste containers and the contents of the
containers must be clearly identified.

5.81 Combustible dust

If combustible dust collects in a building or structure or on machinery or equipment, it must be safely removed before accumulation of the dust
could cause a fire or explosion.

5.3 Application

(1) Subject to subsections (2) to (4), sections 5.4 to 5.18 (the WHMIS Requirements) apply to employers and workers with respect to hazardous
products used, stored or handled at a workplace.

(2) The provisions concerning a supplier label and SDS do not apply if the hazardous product is
(a) an explosive as defined in section 2 of the Explosives Act (Canada),
(b) a drug, food or cosmetic device within the meaning of the Food and Drugs Act (Canada),
(c) a pest control product as defined in section 2(1) of the Pest Control Products Act (Canada),
(d) a nuclear substance as defined in section 2 of the Nuclear Safety and Control Act (Canada), that is radioactive, or
(e) a consumer product as defined in section 2 of the Canada Consumer Product Safety Act.

(3) The provisions do not apply if the hazardous product is
(a) wood or a product made of wood,
(b) tobacco or a tobacco product as defined in section 2 of the Tobacco Act (Canada),
(c) a manufactured article, or
(d) being transported or handled pursuant to the requirements of the Transportation of Dangerous Goods Act, 1992 (Canada) or the Transport of Dangerous Goods Act.

(4) The provisions do not apply to a hazardous waste, except that the employer must ensure the safe storage and handling of a hazardous waste generated at the workplace through the combination of worker training and the information required by this Regulation.

[Amended by B.C. Reg. 199/2014, effective February 1, 2015.]
[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.4 Prohibition

(1) Subject to subsection (2), an employer must ensure that a hazardous product is not used, stored or handled in a workplace unless all the applicable WHMIS Requirements concerning labels, product identifiers, SDSs and worker education and training are complied with.

(2) An employer may store a hazardous product in a workplace while actively seeking information required by subsection (1).

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.5 WHMIS program

If hazardous products are used in the workplace the employer, in consultation with the joint committee or health and safety representative, as applicable, must establish and maintain an effective WHMIS program, as part of the overall workplace health and safety program, which

(a) addresses applicable WHMIS Requirements including education and training,
(b) is reviewed at least annually, or more frequently if required by a change in work conditions or available hazard information, and
(c) provides for the periodic evaluation of the knowledge of workers using suitable means such as written tests and practical demonstrations.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.6 Worker education

(1) An employer must ensure that general WHMIS education, as it pertains to the workplace, is provided to workers on the

(a) elements of the WHMIS program,
(b) major hazards of the hazardous products in use in the workplace,
(c) rights and responsibilities of employers and workers, and
(d) content required on labels and SDSs, and the significance of this information.

(2) The employer must ensure that a worker who works with a hazardous product or may be exposed to a hazardous product in the course of his or her work activities is informed about all hazard information received from the supplier concerning that hazardous product as well as any further hazard information of which the employer is aware or reasonably ought to be aware concerning the use, storage and handling of that hazardous product.

(3) If a hazardous product is produced in a workplace, the employer must ensure that a worker who works with or in proximity to the hazardous product or may be exposed to the hazardous product in the course of his or her work activities has access to all hazard information of which the employer is aware or reasonably ought to be aware concerning the use, storage and handling of that hazardous product.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.7 Worker training

(1) An employer must ensure that a worker who works with a hazardous product or may be exposed to a hazardous product in the course of his or her work activities is trained in the following:

(a) the content required on a supplier label and workplace label, and the purpose and significance of the information contained on those labels;
(b) the content required on an SDS and the purpose and significance of the information contained on the SDS;
(c) procedures for the safe use, storage, handling and disposal of the hazardous product;
(d) procedures for the safe use, handling and disposal of the hazardous product contained or transferred in
(i) a pipe or a piping system including valves,
(ii) a process or reaction vessel, or
(iii) a tank car, tank truck, ore car, conveyor belt or similar conveyance;
(e) procedures to be followed where fugitive emissions are present if workers may be exposed to those fugitive emissions;
(f) procedures to be followed in case of an emergency involving the hazardous product.

(2) Instruction required by subsection (1) must be specific to the workplace and cover the safe work procedures and emergency response procedures to be used in the workplace.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.8 Supplier label

(1) Subject to any exemptions from labelling requirements in the Hazardous Products Regulations and this Part, an employer must ensure that a hazardous product or the container of a hazardous product received at a workplace is attached or printed with a supplier label.

(2) Subject to any exemptions from labelling requirements in the Hazardous Products Regulations and this Part, an employer must not remove, deface, modify or alter the supplier label, as long as any amount of a hazardous product remains in a workplace in the container in which it was received from the supplier.

(3) Subject to any exemptions from labelling requirements in the Hazardous Products Regulations and this Part, an employer must replace the label with either a supplier label or a workplace label if a supplier label applied to a hazardous product or a container of a hazardous product becomes illegible or is accidentally removed from the hazardous product or the container.

(4) If an employer imports and receives a hazardous product under the Hazardous Products Regulations at the workplace, without a supplier label or with a supplier label that does not comply with the Hazardous Products Regulations, the employer must affix a workplace label that meets the requirements of the Hazardous Products Regulations.

(5) The employer must update the labels or the information on containers as soon as significant new data is provided to the employer by the supplier.

(6) An employer who has received an unpackaged hazardous product or a hazardous product transported as a bulk shipment, to which, under the exemption in the Hazardous Products Regulations, a supplier label has not been affixed or attached, must apply a label having the information required of a supplier label to the container of the hazardous product or to the hazardous product in the workplace.

(7) Subsections (2) and (3) do not apply if a label is removed under normal conditions of use of a hazardous product that is in a container that has a capacity of 3 ml or less and the label interferes with the normal use of the product.

[Enacted by B.C. Reg. 30/2015, effective August 4, 2015.]

5.9 Workplace label for employer-produced products

(1) If an employer produces a hazardous product at a workplace, the employer must ensure that a workplace label is applied to the hazardous product or the container of the hazardous product.

(2) For purposes of subsection (1), "produces" does not include the escape of a hazardous product from equipment or from another product.

(3) Subsection (1) does not apply if the hazardous product is in a container that is intended to contain the hazardous product for sale or disposition and the container is or is about to be appropriately labelled.

(4) The employer must update the workplace label for a hazardous product produced by the employer as soon as significant new data are available to the employer.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.10 Workplace label for decanted products

(1) If a hazardous product in a workplace is in a container other than the container in which it was received from a supplier, the employer must ensure that the container has a workplace label applied to it.

(2) Subsection (1) does not apply to a portable container that is filled directly from a container that has a supplier label or workplace label applied to it.

(a) if the hazardous product
(i) is under the control of and is used exclusively by the worker who filled the portable container,
(ii) is used only during the shift in which the portable container was filled, and
(iii) the content of the container is clearly identified, or
(b) if all of the hazardous product is required for immediate use.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.11 Piping systems and vessels

If a hazardous product in a workplace is contained or transferred in
(a) a pipe, or piping system including valves,
(b) a process or reaction vessel, or
(c) a tank car, tank truck, ore car, conveyor belt or similar conveyance,

the employer must ensure the safe use, storage and handling of the hazardous product through worker training and the use of labels, placards, or colour coding or any other mode of identification.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.12 Placard identifiers

If the hazardous product is not in a container or is in a container in a form intended for export, the employer may fulfill the labelling requirements under sections 5.8 to 5.10 by posting a placard which
(a) discloses the information required for a workplace label, and
(b) is of a size and in locations so that the information is conspicuous and clearly legible to workers.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.13 Laboratory label

(1) If a laboratory sample of a hazardous product is the subject of a labelling exemption under the Hazardous Products Regulations, a label provided by the supplier and affixed to, printed on or attached to the container of the product received at the workplace that discloses the following information in place of the information required under the Hazardous Products Regulations complies with the requirements of section 5.8 of this Part with respect to a supplier label:

(a) the chemical name or generic chemical name of any material or substance in the hazardous product that, individually, is classified, pursuant to the Hazardous Products Act and the Hazardous Products Regulations, in any category or subcategory of a health hazard class and is present above the relevant concentration limit, or is present at a concentration that results in the mixture being classified in a category or subcategory of any health hazard class, if known by the supplier;

(b) the statement "Hazardous Laboratory Sample. For hazard information or in an emergency, call Échantillon pour laboratoire de produit dangereux. Pour obtenir des renseignements sur les dangers ou en cas d'urgence, composez" followed by an emergency telephone number for the purpose of obtaining information that must be provided on the SDS of the hazardous product.

(2) If a hazardous product is in a container other than the container in which it was received from a supplier, or is produced in the workplace, the employer is exempt from the requirement set out in section 5.10 if the hazardous product
(a) is a laboratory sample,
(b) is intended by the employer solely for use, analysis, testing or evaluation in a laboratory, and
(c) is clearly identified through a combination of
(i) a mode of identification visible to workers at the workplace, and
(ii) worker education and training required by this Part.

(3) The employer must ensure that the mode of identification and worker education and training referred to in subsection (2)(c) enable the worker to readily identify and obtain either the information required on an SDS, if one has been produced, or a label or document disclosing the information referred to in subsection (1)(a) and (b) with respect to the hazardous product or the laboratory sample.
5.14 Supplier SDS

(1) Subject to subsection (6), an employer who acquires a hazardous product for use, handling or storage at a workplace must obtain a supplier SDS in respect of that hazardous product that complies with the requirements of the Hazardous Products Regulations.

(2) When a supplier SDS obtained under subsection (1) for a hazardous product is 3 years old, the employer must obtain from the supplier an up-to-date supplier SDS in respect of any of that hazardous product in the workplace at that time.

(3) Subsection (2) does not apply if
(a) the employer has obtained written confirmation from the supplier that
(i) the SDS has not changed, or
(ii) the up-to-date supplier SDS does not apply to the hazardous product, or
(b) it is not practicable for the employer to obtain the up-to-date SDS or written confirmation under paragraph (a).

(4) If the employer is unable to obtain an SDS as required by subsection (2), the employer must add to the existing supplier SDS any significant new data or new hazard information applicable to that hazardous product that the employer is aware of, or ought reasonably to be aware of, on the basis of the ingredients disclosed in that document.

(5) The employer may provide at a workplace an SDS in a format different from the format provided by the supplier or containing additional hazard information if the SDS provided by the employer
(a) subject to section 5.18, contains no less content than the supplier SDS, and
(b) the supplier SDS is available at the workplace and the employer-provided SDS indicates that fact.

(6) If a supplier is exempted by the Hazardous Products Regulations from the requirement to provide an SDS for a hazardous product, the employer is exempt from the requirement to obtain and provide an SDS for that hazardous product.

5.15 Employer SDS

(1) If an employer produces a hazardous product in the workplace, the employer must prepare an SDS in respect of that product that discloses, subject to section 5.18, the information required under the Hazardous Product Regulations.

(2) For the purpose of subsection (1), "produces" does not include the escape of a hazardous product from equipment or from another product nor does it include intermediate products undergoing reaction within a reaction or process vessel.

(3) The employer must update the SDS referred to in subsection (1) as soon as practicable after significant new data or new hazard information becomes available to the employer.

5.16 Availability of an SDS

(1) An employer must ensure that a copy of an SDS required by sections 5.14 or 5.15 is made readily available
(a) at the workplace to workers who may be exposed to the hazardous product, and
(b) to the joint committee or to the worker health and safety representative, as applicable.

(2) If an employer is required by subsection (1) to make an SDS readily available, the joint committee or worker health and safety representative, as applicable, must be consulted on the means on how best to achieve SDS accessibility in the workplace.

5.16.1 Availability of toxicological data

Subject to section 5.18, if an employer manufactures a hazardous product in a workplace, the employer must disclose as quickly as practicable the source of any toxicological data used in preparing the SDS required by section 5.15(1), at the request of
(a) any concerned worker at the workplace, the joint committee or the worker health and safety representative,
(b) the representative of the workers at the workplace, in the absence of a joint committee or worker health and safety representative, or
c) the Board.

[Enacted by B.C. Reg. 30/2015, effective August 4, 2015.]

5.17 Deletions from an SDS

If an employer claims an exemption under section 5.18, the employer may delete the information that is the subject of the claim from the SDS required by sections 5.14 and 5.15 for the time period in section 5.18(8), but may not delete hazard information.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.18 Confidential business information and claims for exemption under the HMIRA

(1) An employer who is required, under this Regulation, to disclose any of the following information on a label or SDS may, if the employer considers it to be confidential business information, claim an exemption from the requirement to disclose the information:

(a) in the case of a material or substance that is a hazardous product,
   (i) the chemical name of the material or substance,
   (ii) the CAS registry number, or any other unique identifier, of the material or substance, and
   (iii) the chemical name of any impurity, stabilizing solvent or stabilizing additive that is present in the material or substance, that is classified in a category or subcategory of a health hazard class under the Hazardous Products Act and that contributes to the classification of the material or substance in the health hazard class under that Act;

(b) in the case of an ingredient that is in a mixture that is a hazardous product,
   (i) the chemical name of the ingredient,
   (ii) the CAS registry number, or any other unique identifier, of the ingredient, and
   (iii) the concentration or concentration range of the ingredient;

(c) in the case of a material, substance or mixture that is a hazardous product, the name of any toxicological study that identifies the material or substance;

(d) the product identifier of a hazardous product, being its chemical name, common name, generic name, trade name or brand name;

(e) information about a hazardous product, other than the product identifier, that constitutes a means of identification;

(f) information that could be used to identify a supplier of a hazardous product.

(2) A claim under subsection (1) must be made under the Hazardous Materials Information Review Act and must be filed in accordance with the procedures established under that Act and the regulations made under it.

(3) An employer is deemed to comply with section 5.15 of this Regulation if the employer produces a hazardous product in the workplace and files a claim for exemption under subsection 11(2)(a) or (b)(i) or (ii) of the Hazardous Materials Information Review Act, and the employer prepares an SDS in respect of that hazardous product that discloses the following in place of the information elements listed in section 3(1)(a), (b), (c) and (d) or 3(2)(a), (b) and (c) of Schedule 1 of the Hazardous Products Regulations:

(a) in the case of a hazardous product that is a material or substance, the generic chemical name of the material or substance;

(b) in the case of a hazardous product that is a mixture, the generic chemical name of each material or substance in the mixture that, individually, is classified in any category or subcategory of a health hazard class and is present above the applicable concentration limit or is present at a concentration that results in the mixture being classified in a category or subcategory of any health hazard class.

(4) An employer is deemed to comply with section 5.15 of this Regulation if the employer produces a hazardous product in the workplace and files a claim for exemption under subsection 11(2)(b)(iii) of the Hazardous Materials Information Review Act, and the employer prepares an SDS in respect of that hazardous product that does not disclose the information element listed in section 3(2)(d) of Schedule 1 of the Hazardous Products Regulations.

(5) An employer is deemed to comply with section 5.15 of this Regulation if the employer produces a hazardous product in the workplace and files a claim for exemption under subsection 11(2)(d) of the Hazardous Materials Information Review Act, and the employer prepares an SDS in respect of that hazardous product that discloses, in place of the product identifier, a code name or code number for the product.

(6) An employer who files a claim for exemption from a requirement to disclose information in respect of a hazardous product on an SDS or on a
label must disclose on the SDS and, where applicable, on the label of the hazardous product or the container of the hazardous product,

(a) the date that the claim for exemption was filed, and

(b) the registry number assigned to the claim under the *Hazardous Materials Information Review Act*.

(7) The requirements referred to in subsection (6) apply until

(a) in the case of an order that was issued by a screening officer under the *Hazardous Materials Information Review Act*, the end of the period that begins on the final disposition of the proceedings under that Act in relation to the claim for exemption and does not exceed the period specified in the order, or

(b) in any other case, the end of the period not exceeding 30 days after the final disposition of the proceedings in relation to the claim for exemption.

(8) Information that an employer considers to be confidential business information is exempt from disclosure from the time a claim is filed under subsection (2) until the final disposition of the proceedings under the *Hazardous Materials Information Review Act* in relation to the claim and for a period of 3 years after that if the claim is found to be valid.

(9) An employer who receives notice of a decision made under the *Hazardous Materials Information Review Act* that the employer's claim or a portion of the employer's claim for exemption from a requirement to provide information in respect of a hazardous product on an SDS or a label is valid must, during the period beginning no later than the end of the applicable period specified in subsection (7) of this section and on compliance with any order issued under subsection 16(1) or 17(1) of the *Hazardous Materials Information Review Act*, if applicable, and ending on the last day of the exemption period, in respect of the sale or importation of the hazardous product, disclose on the SDS and, if applicable, on the label of the hazardous product or container in which the hazardous product is packaged, the following information:

(a) a statement that an exemption has been granted;

(b) the date of the decision granting the exemption;

(c) the registry number assigned to the claim under the *Hazardous Materials Information Review Act*.

(10) An employer who makes a claim under subsection (1) must abide by the decisions and orders issued under the *Hazardous Materials Information Review Act*.

(11) An appeal from a decision or order referred to in subsection (10) may be made under and in accordance with the *Hazardous Materials Information Review Act* and any regulations made under that Act.

[Enacted by B.C. Reg. 30/2015, effective August 4, 2015.]

5.19 Claims under the *HMIR Act*

Repealed. [B.C. Reg. 30/2015, effective August 4, 2015.]

5.1 Definitions

In this Part

"8-hour TWA limit" means the time weighted average (TWA) concentration of a substance in air which may not be exceeded over a normal 8 hour work period;

"ACGIH" means

(a) the American Conference of Governmental Industrial Hygienists publication entitled *Threshold Limit Values and Biological Exposure Indices*, dated 2002, as amended from time to time, or

(b) the American Conference of Governmental Industrial Hygienists publication entitled *Documentation of the Threshold Limit Values and Biological Exposure Indices*, as amended from time to time;

"adverse health effect" means an acute or chronic injury, acute or chronic disease, or death;

"approved storage area" means a storage area which meets the requirements of article 4.2.7.5 of the *BC Fire Code*;

"approved storage cabinet" means a flammable liquids storage cabinet which bears a UL or ULC approval label for this purpose or which otherwise meets the requirements of subsection 4.2.10 of the *BC Fire Code*;

"approved storage room" means a room for container storage which meets the requirements of section 4.2.9 of the *BC Fire Code*;

"as low as reasonably achievable" or "ALARA" means, in reference to a substance, that measures must be taken to keep a worker's exposure
to a level as low as is reasonably achievable;

"bulk shipment" means a shipment of a hazardous product that is contained in any of the following, without intermediate containment or intermediate packaging:

(a) a vessel that has a water capacity equal to or greater than 450 litres;
(b) a freight container, road vehicle, railway vehicle or portable tank;
(c) the hold of a ship;
(d) a pipeline;

"carcinogen" means a substance or a mixture of substances which is identified as a carcinogen in section 5.57(1), or
(a) causes an increased incidence of benign or malignant neoplasms, or
(b) substantially decreases the latency period between exposure and onset of neoplasms in humans, or
(c) results in the induction of tumors at a site other than the site of administration in one or more experimental mammalian species as a result of any oral, respiratory, or dermal exposure, or any other exposure, or
(d) is metabolized into one or more potential occupational carcinogens by mammals;

"CAS registry number" means the identification number assigned to a chemical by the Chemical Abstracts Service, a division of the American Chemical Society;

"ceiling limit" means the concentration of a substance in air which may not be exceeded at any time during the work period;

"compressed gas" means a substance that meets the criteria for Physical Hazard Class — Gases Under Pressure, Part 7, Subpart 5 of the HPR;

"container" includes a bag, barrel, bottle, box, can, cylinder, drum or similar package or receptacle, but does not include a storage tank;

"continuous flow emergency shower facility" means a facility capable of delivering water with a spray pattern designed to effectively flush affected areas of the skin;

"continuous flow eyewash facility" means a plumbed or portable facility capable of delivering a minimum of 1.5 litres of water per minute (0.33 imp gal per min) with a water pressure not exceeding 175 kPa (25 psi) and with a spray pattern designed to effectively flush both eyes;

"drench hose" means a flexible hose connected to a water supply and capable of delivering a minimum of 11.4 litres of water per minute (2.5 imp gal per min), for use to flush the eyes and/or skin;

"flammable gas" means a substance that meets the criteria for Physical Hazard Class — Flammable Gases, Part 7, Subpart 2 of the HPR;

"fugitive emission" means a gas, liquid, solid, vapour, fume, mist, fog or dust that escapes from process equipment, emission control equipment or from a product where workers may be readily exposed;

"hazard information" means information on the proper and safe use, storage and handling of a hazardous product and includes information related to its health and physical hazards;

"Hazardous Materials Information Review Act" or "HMIRA" means the Hazardous Materials Information Review Act (Canada);

"Hazardous Products Act" or "HPA" means the Hazardous Products Act (Canada);

"Hazardous Products Regulations" or "HPR" means the Hazardous Products Regulations (Canada);

"hazardous waste" means a hazardous product that is acquired or generated for recycling or recovery or is intended for disposal;

"hazardous waste profile sheet" means a written description of the hazardous waste which identifies its hazardous characteristics, hazardous ingredients, and prescribes safe work procedures for handling, storing, using and disposing of the waste;

"IARC" means the International Agency for Research on Cancer publication Monographs on the Evaluation of Carcinogenic Risks to Humans, as amended from time to time;

"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 on or attached to the hazardous product or the container in which the hazardous product is packaged;

"laboratory sample" means a sample of a hazardous product that is packaged in a container that contains less than 10 kg of the hazardous product and is intended solely to be tested in a laboratory, but does not include a sample that is to be used
(a) by the laboratory for testing other products, mixtures, materials or substances, or
(b) for educational or demonstration purposes;

"manufactured article" means an article that is formed to a specific shape or design during manufacture, the intended use of which, when in that
form, is dependent in whole or in part on its shape or design and that, under normal conditions of use, will not release or otherwise cause an
individual to be exposed to a hazardous product;

"personal eyewash unit" means an eyewash that supplements an emergency eyewash facility by delivering immediate flushing for less than 15
minutes;

"portable tank" means a closed container that is designed to be movable while containing liquid, which is equipped with skids, mountings or
accessories to facilitate handling of the tank by mechanical means and is not permanently attached to a transporting vehicle, as defined in the BC
Fire Code;

"product identifier" means, in respect of a hazardous product, the brand name, chemical name, common name, generic name or trade name;

"readily available" means, when used in connection with an SDS, present in an appropriate place and in the form of either
(a) a physical copy that can be handled, or
(b) an electronic copy,
that is accessible to a worker at all times;

"short-term exposure limit" or "STEL" means the time weighted average (TWA) concentration of a substance in air which may not be
exceeded over any 15 minute period, limited to no more than 4 such periods in an 8 hour work shift with at least one hour between any 2
successive 15 minute excursion periods;

"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;

"storage tank" means a closed container that has a capacity of more than 250 litres (55 imp gal) and is designed to be installed in a fixed location,
as defined in the BC Fire Code;

"supplementary eyewash facility" means a personal eyewash unit or a drench hose;

"supplier label" means a label provided by a supplier that contains the information elements required by the Hazardous Products Act;

"tempered" means maintained at temperatures from 15°C to 30°C (60°F to 85°F);

"temporary" means non-routine work, and does not refer to routine work of short duration;

"workplace label" means a label that discloses
(a) a product identifier that is identical to that found on the SDS of the corresponding hazardous product,
(b) information for the safe handling of the hazardous product that is conveyed in a manner appropriate to the workplace, and
(c) that an SDS, if supplied or produced, is available.

[Amended by B.C. Reg. 296/97, effective October 1, 1999.]
[Amended by B.C. Reg. 315/2003, effective October 29, 2003.]
[Amended by B.C. Reg. 319/2007, effective February 1, 2008.]
[Amended by B.C. Reg. 258/2008, effective January 1, 2009.]
[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.1.1 Designation as hazardous substances

For the purposes of sections 5.2 and 6.33 to 6.40 and Part 30, the following biological agents are designated as hazardous substances:

(a) a liquid or solid material that is contaminated with a prion, virus, bacterium, fungus or other biological agent that has a classification given by the
Public Health Agency of Canada as a Risk Group 2, 3 or 4 human pathogen that causes an adverse health effect;

(b) a biological toxin that causes an adverse health effect.

[Enacted by B.C. Reg. 319/2007, effective February 1, 2008.]
[Amended by B.C. Reg. 312/2010, effective February 1, 2011.]

5.2 General information requirement
If a worker is or may be exposed to a chemical agent, or biological agent designated as a hazardous substance in section 5.1.1, which could cause an adverse health effect, the employer must ensure that

(a) the identity of the chemical agent or biological agent, its possible effects on worker health and safety and any precautions required to protect the health and safety of the worker are clearly indicated by labels, SDSs, or other similar means,

(b) the information required by paragraph (a) is clearly communicated to the worker,

(c) written procedures are prepared and implemented to eliminate or minimize a risk of exposure to a chemical agent or biological agent by any route that could cause an adverse health effect, and to address emergency and cleanup procedures in the event of a spill or release of a chemical agent or biological agent, and

(d) the supervisor and the worker are trained in and follow the measures required in this Part and Part 6 of this Regulation for the safe handling, use, storage and disposal of the chemical agent or biological agent, including emergency and spill cleanup procedures.

[Amended by B.C. Reg. 319/2007, effective February 1, 2008.]
[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.27 Ignition sources

(1) When a flammable gas or a flammable liquid is handled, used or stored, all sources of ignition must be eliminated or adequately controlled.

(2) For the purposes of subsection (1) sources of ignition include open flame, spark-producing mechanical equipment, welding and cutting processes, smoking, static discharge and any electrical equipment or installation that is not permitted under the B.C. Electrical Code for use in hazardous locations.

(3) If the work involves more than one employer, the prime contractor or, if there is no prime contractor, the owner must ensure that sources of ignition resulting from the work of one employer are eliminated or adequately controlled in any work area where a flammable gas or a flammable liquid is handled, used or stored by any other employer.

[Amended by B.C. Reg. 199/2014, effective February 1, 2015.]
[Amended by B.C. Reg. 9/2017, effective May 1, 2017.]
[Amended by B.C. Reg. 14/2019, effective June 3, 2019.]

5.28 Grounding or bonding

Metallic or conductive containers used to transfer flammable liquids must be electrically bonded to each other or electrically grounded while their contents are being transferred from one container to the other.

5.29 Electrostatic charge

If glass, plastic or other non-conductive container with a capacity of 23 litres (5 imp gal) or more is used to transfer a flammable liquid, the accumulation of electrostatic charge near the surface of the liquid must be eliminated or controlled by

(a) limiting the flow velocity of the liquid to less than 1 m/s (200 fpm),

(b) using a grounded lance or nozzle extending to the bottom of the container,

(c) limiting free fall,

(d) using anti-static additives, or

(e) other effective means.

5.30 Dispensing

If a flammable liquid is dispensed or transferred inside a flammable liquids storage room,

(a) the storage room must be mechanically ventilated at a rate of at least 18 m³/hr per square metre of floor area (1 cfm/sq ft), but not less than 250 m³/hr (150 cfm),

(b) exhaust air must be discharged to the outdoors, and makeup air provided,

(c) any makeup air duct passing through a fire separation must be equipped with an approved fire damper, and

(d) doors must be self-closing.

5.31 Flammable gas or vapour
If it is not practicable to maintain the airborne concentration of a flammable gas or vapour below the applicable exposure limit, for example, in a temporary situation or an emergency,

(a) only the minimum number of workers necessary for the work may be exposed,

(b) every worker exposed must be adequately trained and equipped to safely perform the required duties,

(c) the concentration of the flammable gas or vapour must not exceed 20% of the lower explosive limit (LEL), and

(d) in a life-threatening emergency only, exposure of emergency response workers is permitted above 20% of the LEL, provided that only those qualified and properly trained and equipped workers necessary to correct the unsafe condition are exposed to the hazard and every possible effort is made to control the hazard while this is being done.

5.32 Manual cleaning

A flammable liquid must not be used as a manual cleaning solvent unless

(a) a thorough review of alternative solvents by the employer indicates that a suitable non-flammable substitute is not available,

(b) appropriate written safe work procedures are implemented to effectively control flammability and health hazards,

(c) the quantity of liquid used is minimized,

(d) the worker is instructed and trained in the safe work procedures, and

(e) the work procedures have been submitted to the Board.

5.33 Permitted quantities

Except for the quantity reasonably needed for immediate use, or that is present for display or sale in public areas of a mercantile facility, the quantity of combustible and flammable liquids stored outside an approved storage cabinet, storage room or storage area in any fire compartment (2 hour fire separation) of a building must not exceed

(a) in closed containers, 600 litres (132 imp gal) of liquids having a flash point below 93.3°C (200°F) of which not more than 100 litres (22 imp gal) may be liquids having a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F), and

(b) in storage tanks or portable tanks, 5,000 litres (1,100 imp gal) of liquids having a flash point below 93.3°C (200°F) and a boiling point at or above 37.8°C (100°F).

5.34 Combustible materials

Except for packaging used to contain flammable or combustible liquids, combustible shelves, racks and other materials are not permitted inside a flammable or combustible liquids storage room or storage cabinet unless required as part of a fire separation.

5.35 Cabinet vent

If a flammable liquids storage cabinet is vented, the vent must be a steel pipe at least 5 cm (2 in) in diameter which is connected directly to the outdoors.

5.36 Containers

(1) A tank, cylinder, bottle or other vessel containing a substance under pressure, together with any associated pressure or flow regulator and piping or conveyance system, must be

(a) protected from sparks, flames, excessive heat, physical damage, electrical contact or corrosion, and

(b) equipped with suitable pressure relief mechanisms installed so that no worker will be endangered in the event of discharge.

(c) Repealed. [B.C. Reg. 312/2003, effective October 29, 2003.]

(2) Hand-held aerosol spray cans are exempt from the requirements of subsection (1)(b).

[Amended by B.C. Reg. 312/2003, effective October 29, 2003.]

5.37 Pressure testing

A compressed gas container which requires pressure testing must bear a valid and current indication that it has been pressure tested.
5.38 Handling and securing cylinders

(1) A compressed gas cylinder must not be hoisted by a sling or magnet, dropped, subjected to impact, handled by the regulator or used as a roller or work support.

(2) A compressed gas cylinder must be secured to prevent falling or rolling during storage, transportation and use, and where practicable, must be kept in the upright position.

5.39 Cylinder markings

A compressed gas cylinder must be marked to indicate its rated pressure and the type of gas it contains.

5.40 Cylinder valves

(1) The valve on a compressed gas cylinder must be kept closed when the cylinder is empty or not in use.

(2) A worker must not stand directly in front of a regulator attached to a compressed gas cylinder when the cylinder valve is being opened.

(3) Any valve, regulator or fitting connected to a compressed gas cylinder must be a standard fitting, designed and manufactured for the type of cylinder and compressed gas for which it will be used, and must include provisions for flashback arresters where necessary.

(4) Unless a compressed gas cylinder is equipped with an integral valve guard, the valve cover must be in position when the cylinder is not connected for use.

5.41 Fittings

Only standard fittings designed for the specific compressed gas service may be used with a compressed gas system.

5.42 Regulator maintenance

Repealed. [B.C. Reg. 312/2003, effective October 29, 2003.]

5.43 Empty cylinders

An empty compressed gas cylinder must be identified as being empty and must be stored separately from other compressed gas cylinders.

5.44 Acetylene cylinders

(1) A compressed gas cylinder containing acetylene must be used only in the upright position.

(2) If the cylinder has been stored or transported in a horizontal position, it must be placed in the upright position for at least 1 hour before it is used.

(3) A suitable device for closing the valve on an acetylene cylinder must be immediately available when the cylinder is connected for use.

5.45 Restriction on use of copper

A fitting or tube made of copper or any alloy containing more than 67% copper must not be used in a system carrying acetylene gas, except for copper torch tips and lengths of copper tubing 30 cm (1 ft) or less in length which are open to the atmosphere.

5.46 Restriction on use of oxygen

(1) Oxygen gas must not be used in any circumstance where it can contact a substance that oxidizes readily, such as a petroleum product, natural fibre or metal powder.

(2) Oxygen gas must not be used to

(a) operate a pneumatic tool,

(b) start an internal combustion engine,

(c) clean equipment or clothing,

(d) create pressure in a container, or

(e) ventilate a workplace.
5.47 Cleanliness

A worker must not permit oil or grease to contact an oxygen cylinder valve, regulator, or fitting.

5.97 Emergency plan

(1) A workplace must have a written emergency plan, appropriate to the hazards of the workplace, that addresses the requirements of sections 5.98 to 5.102.

(2) The plan must address emergency conditions which may arise from within the workplace and from adjacent workplaces.

(3) The plan must be developed, implemented and annually reviewed in consultation with the joint committee or the worker health and safety representative, as applicable.

5.98 Inventory

(1) An inventory must be maintained which identifies all hazardous substances at the workplace in quantities that may endanger workers in an emergency including hazardous products covered by WHMIS, explosives, pesticides, radioactive materials, hazardous wastes, and consumer products.

(2) The inventory must identify the nature, location, and approximate quantity of all such substances, and the location of SDSs.

[Amended by B.C. Reg. 30/2015, effective August 4, 2015.]

5.99 Risk assessment

An employer must ensure that an assessment is conducted of the risks posed by hazardous substances from accidental release, fire or other such emergency.

5.100 Procedures for evacuation

(1) Written evacuation procedures appropriate to the risk must be developed and implemented to

(a) notify workers, including the first aid attendant, of the nature and location of the emergency,

(b) evacuate workers safely,

(c) check and confirm the safe evacuation of all workers,

(d) notify the fire department or other emergency responders, and

(e) notify adjacent workplaces or residences which may be affected if the risk of exposure to a substance extends beyond the workplace.

(2) Notification of the public must be in conformity with the requirements of other jurisdictions, including provincial and municipal agencies.

5.101 Procedures for spill cleanup and re-entry

If workers are required to control a release of a hazardous substance, to perform cleanup of a spill, or to carry out testing before re-entry, the employer must provide

(a) adequate written safe work procedures,

(b) appropriate personal protective equipment which is readily available to workers and is adequately maintained, and

(c) material or equipment necessary for the control and disposal of the hazardous substance.

Note: Other jurisdictions and agencies may require notification in the event of a spill.

5.102 Training and drills

The employer must

(a) provide training in the appropriate emergency procedures to all workers who may be affected, and

(b) conduct drills to test the adequacy of procedures and to ensure that workers and supervisors are familiar with their roles and responsibilities.

TABLE 5-4: EXPOSURE LIMITS AND DESIGNATIONS
Repealed. [B.C. Reg. 315/2003, effective October 29, 2003.]

5.72 Venting outdoors

Whenever possible, exhaust from any internal combustion engine operated indoors must be vented to the outdoors.

5.73 Indoor operation

If mobile equipment powered by an internal combustion engine is operated indoors or in an enclosed work area

(a) the engine must be adequately serviced and maintained to minimize the concentration of air contaminants in the exhaust, and

(b) the work area must be assessed to determine the potential for exposure of workers to harmful levels of exhaust components.

5.74 Emission controls

If a worker is or may be exposed to an exhaust gas component in concentrations exceeding the applicable exposure limits, exhaust gas scrubbers, catalytic converters, or other engineering controls must be installed.

5.75 Mobile equipment emission controls

Mobile equipment manufactured after January 1, 1999 that is regularly operated indoors must be

(a) equipped with an emission control system that includes a feedback control for air/fuel ratio, and a three-way catalytic converter if the mobile equipment is powered by gasoline, propane or natural gas, or other measures acceptable to the Board, or

(b) equipped with a scrubber or other emission control system that reduces particulate emissions by at least 70% when tested according to the procedures of the Mine Safety and Health Administration, US Department of Labour, or must meet another standard acceptable to the Board, if the mobile equipment is powered by diesel fuel.

[Amended by B.C. Reg. 381/2004, effective January 1, 2005.]