

Part 29 Workplace Hazardous Materials Information System (WHMIS)

Highlights

This Part presents all the labelling, material safety data sheet (MSDS) and training requirements for employers and workers that handle controlled products.

- Sections 398 and 404 allow an employer to store a controlled product without WHMIS, MSDS or label information for no more than 120 days, as long as the employer is actively seeking the supplier label or MSDS and as long as placards are provided in the storage area.
- Section 406 requires that the information presented on an MSDS be newer than three years old.

Requirements

Section 395 Application

Subsections 395(1) and 395(2)

No explanation required.

Subsection 395(3)

Products that are completely exempt from the requirements of WHMIS are:

- (a) wood or products made of wood,
- (b) tobacco or a tobacco product,
- (c) a hazardous waste, or
- (d) a manufactured article.

Subsection 395(3)(a)

This exemption is meant to refer to a structural item composed entirely or in large measure of wood, but does not consist of products derived from wood such as turpentine, paper, wood pulp and wood dust. Examples of products to which this exemption applies include lumber of all sizes, laminated beams, plywood, chipboard, particleboard, wood chips, sawdust and products that have been coated with paints or preservatives. At facilities where specialized products made of wood are manufactured, additives such as adhesives, paints and preservatives are subject to all applicable WHMIS information provisions prior to being added to the finished product.

Wood dust that is sold or imported for use at Canadian workplaces and meets the criteria for a controlled product is not exempt from WHMIS.

Subsection 395(3)(b)

The federal *Tobacco Act* defines a tobacco product as “a product composed in whole or in part of tobacco leaves and any extract or tobacco leaves. It includes cigarette papers, tubes and filters but does not include any food, drug or device that contains nicotine to which the *Food and Drugs Act* applies”. While products made of tobacco (including cigarettes, cigars, chewing tobacco and snuff) are exempt from the WHMIS provisions, products derived from tobacco, such as nicotine, are not.

Subsection 395(3)(c)

Examples of hazardous waste include solid and liquid materials such as waste insulation in asbestos removal projects, contents of tailing ponds or sewage systems and products for recycling such as engine oil. A by-product of a production process that is recycled or otherwise used on-site is not a hazardous waste e.g. black liquor in the pulping process. A by-product supplied to a party off-site for use as is (is not subjected to a conversion process such as recycling or recovery) is also not a hazardous waste. The definition of hazardous waste implies an intent to manage or handle the product.

Subsection 395(3)(d)

A manufactured article is an article that meets three conditions:

- (1) it is formed to a specific shape or design during manufacture;
- (2) its intended use when in that form depends in whole or in part on its shape or design as manufactured; and
- (3) under normal conditions of use, it will not release or otherwise cause a person to be exposed to a controlled product.

Other relevant points related to the manufactured article exemption are:

- (a) If a product does not contain a controlled product when it is sold or imported, it is not subject to the federal aspects of WHMIS under the *Hazardous Products Act*, even if a controlled product is formed and released when the article is used.
- (b) Normal conditions of use exclude releases of a controlled product that occur during installation, maintenance or occur if the article is abused. For example, normal conditions of use for a carpet or pipe are to be walked on or to carry fluid, respectively. Releases of controlled products from a carpet that occur during installation or from a pipe when it is welded or cut do not preclude these items from being included in the exemption.
- (c) The release of trace amounts of controlled product from manufactured articles does not preclude the articles from being included in this exemption.
- (d) If a controlled product is a manufactured article but not exempt because it releases, under normal conditions of use, a controlled product, the supplier must provide hazard information and ingredient identity and concentration information related only to those ingredients that are controlled products and are released under normal conditions. Hazardous decomposition products and hazardous combustion products of which the supplier is aware, or ought reasonably to be aware, that are released during normal use of articles that are controlled products must be identified on the MSDS. The supplier is not expected to give toxicological data on probable releases that are not ingredients of the product.
- (e) If a product releases hazardous chemicals under normal conditions of use, and the supplier is uncertain about which chemicals they are, the supplier must provide general warnings about possible toxic releases on the MSDS. Any other hazard information that the supplier is aware of, or ought reasonably to be aware of, must also appear in the MSDS.

The following are examples of how the manufactured article exclusion is applied:

- Welding rods are not a manufactured article because they release, during normal use, controlled products that they previously contained (metal fume).
- Precut threaded piping is a manufactured article because it does not release contaminants during its intended use of conveying fluids.

- Specific friction products that contain asbestos are manufactured articles e.g. brake shoes fitted with pre-arc'd linings. While workers may be exposed to asbestos fibres while installing or maintaining these articles, exposure is not likely during their use for the purpose of braking. However, sheets of friction materials such as gaskets which contain asbestos and are made with the intent of later being cut or shaped to form specific products, are not manufactured articles.
- A cylinder produced to contain acetylene is a manufactured article. Once it is filled with acetylene, it becomes a container for a controlled product and when sold as such, must be provided with a WHMIS label and MSDS. A refrigerator is a manufactured article consisting of various components, including a system containing compressed gases. However, unlike the compressed gas cylinder, the refrigerator is not considered to be a container of a controlled product.

Subsection 395(4)

The *Alberta Dangerous Goods Transportation and Handling Act* deals with the shipping of hazardous products in the province. The *Alberta Dangerous Goods Transportation and Handling Regulations* made under the *Act* adopt, with some modifications, the federal *Transportation of Dangerous Goods Regulations (TDGR)* with respect to the classification and labelling of products being transported or offered for transport. TDGR and WHMIS are complementary systems. TDGR covers information requirements when products are shipped to or from workplaces, while WHMIS applies to products at the workplace. No overlap is intended; one system takes over where the other leaves off. Although WHMIS labels and MSDSs may be provided with shipments, the WHMIS requirements only apply at the point of sale and at the workplace after the controlled product is received.

Dangerous goods include a product, substance or organism listed in Schedule II of the *TDGR* or substances that are otherwise classified as dangerous goods through application of criteria described in the *TDGR*. The *TDGR* does not apply to the transport of oil or gas in a pipeline where this is governed by federal or provincial legislation.

“Handling and offering for transport” refers to activities such as assembling, packaging, storing, loading and unloading for transport. For example, WHMIS does not apply to products while in temporary storage in a distribution warehouse.

“Storing for transport” is storage where goods will not be handled any further at the workplace other than to load them directly onto a transport vehicle for the purpose of removal from the workplace.

“Transportation” means to and from workplaces. WHMIS applies to all circumstances where goods are transported from one point to another within a workplace, except for radioactive substances and explosives, in which case *TDGR* applies.

“Warehousing” means where a controlled product is stored prior to transport. WHMIS would apply in a warehouse where the products are handled, repackaged, used, processed or sold.

The exemption for products being transported is because training requirements for workers transporting dangerous goods are already covered in *TDGR*. However, drivers are often exposed to the controlled product by being actively involved in its loading or unloading. MSDSs must be readily available to the driver, and other transportation workers, who may be exposed to a controlled product.

Subsection 395(5)

Ten types of products are partially excluded from the WHMIS information requirements, even if the products meet the criteria for inclusion within one or more of the WHMIS classes. Products exempt from the requirements related to labelling and MSDSs include:

- (a) explosives within the meaning of the *Explosives Act*;
- (b) cosmetics, drugs, foods or devices within the meaning of the *Food and Drugs Act*;
- (c) control products within the meaning of the *Pest Control Products Act*;
- (d) nuclear substances within the meaning of the *Nuclear Safety and Control Act*; and
- (e) restricted products (products, materials or substances included in Part II of Schedule I of the *Hazardous Products Act*) when packaged as consumer products in accordance with the federal *Consumer Chemical Containers Regulations*.

Subsection 395(5)(a)

The *Explosives Act* (Canada) defines an explosive as “any thing that is made, manufactured or used to produce an explosion or a detonation or pyrotechnic effect, and includes any thing prescribed to be an explosive by the regulations, but does not include gases, organic peroxides or any thing prescribed not to be an explosive by the regulations”. In the *Explosives Regulations*, the definition includes “gunpowder, propellant powders, blasting agents, dynamite, detonating cord, lead azide, detonators, ammunition of all descriptions, rockets, fireworks, fireworks compositions, safety flares and other signals”.

The *Explosives Act*, which is administered by Natural Resources Canada, controls the manufacture, testing, sale, storage and importation of explosives. Explosives are distinct from substances such as ethers or furans which may form explosive peroxides, and picric acid which may become explosive when dry. These products are considered to be controlled products belonging in Class F, Dangerously Reactive Material.

Subsection 395(5)(b)

The federal *Food and Drugs Act*, administered by Health Canada, defines cosmetics, drugs, foods and devices. The *Act* controls the sale, advertisement, manufacture, packaging and labelling of these products from the viewpoint of preventing economic fraud and health and safety hazards. Of the four types of products legislated by the *Act*, drugs are the most likely to contain controlled products.

“Cosmetic” includes any substance or mixture of substances manufactured, sold or represented for use in cleansing, improving or altering the complexion, skin, hair or teeth, and includes deodorants, perfumes, soaps, tattoo inks and products used to groom animals.

“Drug” includes any substance or mixture of substances manufactured, sold or represented for use in

- (a) the diagnosis, treatment, mitigation or prevention of a disease, disorder, abnormal physical state or the symptoms thereof, in man or animal,
- (b) restoring, correcting or modifying organic function in man or animal, or
- (c) disinfection in premises in which food is manufactured, prepared or kept.

A “drug” as defined in the *Act* includes any raw material that is itself a drug or is used to manufacture a drug in dosage form. Therefore, raw materials that are drugs or are used in the manufacture of drugs are also excluded from the labelling and MSDS requirements of WHMIS. All drugs are issued a Drug Identification Number (DIN) which must appear on the label.

Cosmetics and drugs are defined in terms of being sold or represented for specific purposes. A controlled product sold as a drug or cosmetic would be subject to WHMIS requirements if it were sold for another use. For example, the chemical 2,4-diaminoanisole is excluded from WHMIS supplier requirements when sold in hair dye mixtures, but is included when used as a fur dye. Cosmetics and drugs are usually products that are applied on or taken into the body. A hair dye is a cosmetic, but the formaldehyde solution used to disinfect a hairbrush is not.

“Food” includes any article manufactured, sold or represented for use as food or drink for man, chewing gum and any ingredient that may be mixed with food for any purpose whatever.

Note that when a product normally considered a food has a non-food use at the workplace, it is not excluded from WHMIS. For example, flour, which is a respiratory tract sensitizer, falls within WHMIS Class D if sold and used as an additive or an industrial filler.

“Device” means any article, instrument, apparatus or contrivance, including any component, part or accessory thereof, manufactured, sold or represented for use in

- (a) the diagnosis, treatment, mitigation or prevention of a disease, disorder or abnormal physical state, or the symptoms thereof, in man or animal,
- (b) restoring, correcting or modifying a body function or the body structure of man or animal,
- (c) the diagnosis of pregnancy in humans or animals, or
- (d) the care of humans or animals during pregnancy and at and after birth of the offspring, including care of the offspring, and includes a contraceptive device but does not include a drug.

Subsection 395(5)(c)

The *Pest Control Products Act* (Canada) defines a control product as “any product, device, organism, substance or thing that is manufactured, represented, sold or used as a means for directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest, and includes

- (a) any compound or substance that enhances or modifies or is intended to enhance or modify the physical or chemical characteristics of a control product to which it is added, and
- (b) any active ingredient used for the manufacture of a control product.”

A “control product” under the *Pest Control Products Act* is not to be confused with a “controlled product” under the *Hazardous Products Act*.

Examples of pest control products include insecticides, fungicides, algacides, herbicides, rodenticides, insect repellents, pet repellents, insect attractants, plant growth regulants, microbial control agents, disinfectant type products and devices for pest control. The product is also classified as a pest control product if a claim is made that it disinfects or controls bacteria. For example, bleach that contains sodium hypochlorite is considered to be a pest control product if the manufacturer claims it is a disinfectant. Pest control products are labelled with pest control product numbers that indicate the product is registered under the *Pest Control*

Products Act. There are exceptions to this where the product is used for research and for seed treatment or cleaning.

Like cosmetics and drugs, pest control products are defined in terms of intent for use. Any controlled product used in a pesticide, but manufactured and intended for another use is subject to WHMIS requirements. For example, Stoddard solvent is used as a herbicide, but has a variety of other industrial applications as a solvent and cleaning agent.

Subsection 395(5)(d)

The *Nuclear Safety and Control Act* (Canada), administered by the Canadian Nuclear Safety Commission, defines a nuclear substance as:

- (a) deuterium, thorium, uranium or an element with an atomic number greater than 92;
- (b) a derivative or compound of deuterium, thorium, uranium or of an element with an atomic number greater than 92;
- (c) a radioactive nuclide;
- (d) a substance that is prescribed as being capable of releasing nuclear energy or as being required for the production or use of nuclear energy;
- (e) a radioactive by-product of the development, production or use of nuclear energy; and
- (f) a radioactive substance or radioactive thing that was used for the development or production, or in connection with the use of nuclear energy.

The overall objective of the *Nuclear Safety and Control Act* is the control and supervision of the development, application and use of atomic energy.

Subsection 395(5)(e)

A product, material or substance included in Part II of Schedule I to the *Hazardous Products Act* is a “restricted product” and cannot be sold unless it meets the requirements of the applicable regulations. In the case of chemical products, the applicable regulations are the *Consumer Chemicals and Containers Regulations (CCCR)*. To be packaged as a consumer product, the product must be

- (a) packaged for the consumer (it is in a size of container or package in which it is sold and normally displayed to the consuming public), and
- (b) available to the general public through retail systems either at outlets or on a door-to-door basis.

Quantities available to the consuming public vary from product to product. For example, paint may be available in containers in sizes up to 20 litres. Whether or not a product is a consumer product does not depend on how many containers are purchased at one time.

While these products are exempt from the WHMIS supplier information requirements, the employer must still provide work site labelling on containers into which the products are decanted and workers must be instructed in the hazards of the products and proper procedures for handling them.

Section 396 Hazardous waste

While hazardous wastes are exempt from WHMIS, the employer is still required to ensure that they are safely stored and handled at the work site and that workers are appropriately trained. However, the employer may use discretion in selecting the method of storage and training, as long as workers are adequately protected. The key is to use a system that is appropriate to the workplace and that is understood and followed by workers. Acceptable methods of identifying the waste include placards, coded labels or work site labels as long as they clearly identify the contents of the product containers.

Section 397 Training

Worker education for controlled products must be provided as an integral part of the WHMIS information delivery system. Worker education includes all those activities that provide knowledge and skills to workers so that they may work safely with or near controlled products at the workplace. WHMIS requires that a program of instruction be established that not only provides training in specific work procedures, but also information about requirements for labels, MSDSs and information of significance to worker health and safety.

Information and instruction must be provided to all workers who work with or in proximity to a controlled product. A worker who works with a controlled product is any worker who stores, handles, uses or disposes of a controlled product or who immediately supervises another worker performing these duties. "In proximity" is the area in which the worker's health and safety could be at risk during storage, handling, use or disposal of the product, maintenance operations or in an emergency situation such as a spill or fire. The physical area of risk depends on the quantity of product, its form, the extent of enclosure during its use, scheduling of work activities and persistence of the product after its release.

The employer must:

- (1) for each controlled product supplied to the workplace, provide all hazard information received from the supplier and any additional information of which the employer is, or ought to be, aware of concerning the use, storage and handling of the product;
- (2) develop and implement a program of worker instruction that includes:
 - (a) the content required on supplier and work site labels and the purpose and significance of the information contained on them;
 - (b) the content required on an MSDS and the purpose and significance of the information contained on it;
 - (c) procedures for the safe use, storage, handling or manufacture of the controlled product;
 - (d) methods of identification used in the workplace, where applicable;
 - (e) procedures to be followed where fugitive emissions are present; and
 - (f) procedures to be followed in an emergency.

Section 8 of the *OHS Regulation* requires that procedures be in writing and available to workers.

- (3) consult with the joint work site health and safety committee (if any) or health and safety representative (if any) during the development, implementation and review of the program. Consultation means meeting for the purpose of seeking information or advice.

An employer is considered to have consulted with the committee regarding the program of WHMIS instruction if two conditions are met. Prior finalizing the program, the committee has the opportunity to review and provide information or advice on the entire program, including its content, structure and means of implementation. Means of implementation consists of choice of instructors and the use of in-course evaluations. Secondly, once the program has been implemented, the employer asks for information and advice from the committee on the effectiveness of the program;

- (4) review the program of instruction at least annually, but more frequently if required by a change in work conditions or available hazard information; and
- (5) if MSDSs are available at the workplace on a computer system, the employer must train workers in how to use the system and access the information.

The instruction provided by the employer must be site-specific and deal with specific products and procedures used at the workplace. Providing only generic WHMIS education through a training organization does not meet the WHMIS training requirements. (Generic instruction refers to the instruction of workers in WHMIS hazard information without reference to specific products or work sites.)

Generic instruction is acceptable when providing information about:

- (a) types of content required on MSDSs and labels,
- (b) how WHMIS works,
- (c) hazards of a group of products that have similar properties,
- (d) work procedures for a group of products if the procedures are basically the same for all products in the group,
- (e) work procedures that apply to a variety of work sites if the work procedures are basically the same at each site, and
- (f) as the preliminary stage of instruction in a larger program.

A product-specific and site-specific training component must still be provided by the employer. The employer must ensure, as far as is reasonably practicable, that the program of instruction results in a worker being able to apply the information needed to protect the worker's health and safety. This requirement has several implications.

- (1) While all workers who work with or near a controlled product are likely to receive the same basis instruction, the content may vary somewhat from worker to worker depending on the type of work the worker does.
- (2) Instruction must be integrated into the overall hazard prevention program at the workplace. Procedures training must take into account information available from the label and MSDS, and also the particular circumstances of the workplace. For example, it is not enough to know that the MSDS suggests a particular type of respirator — the worker must know where to obtain it, locations in the plant where its use is mandatory, how to wear it and how to maintain and store it.
- (3) The proof of a successful program is the ability of workers to demonstrate safe work procedures with controlled products and the knowledge of why those procedures are required.

Occupational health and safety officers will usually speak with workers and ask four questions to determine the adequacy of their training and to assess compliance with this section:

- (1) What are the hazards of the controlled product?
- (2) How are you protected from these hazards?
- (3) What do you do in case of an emergency?
- (4) Where can you get more information?

If a worker can correctly answer these questions regarding the controlled product(s) they use or have contact with, the training program is considered to be adequate and meets the requirements of this section.

For materials exempted under section 395 of the *OHS Code*, the employer is still required to provide worker education about MSDSs and labels, even though these products are exempt from the MSDS and labelling requirements. These substances were exempted under this section because there are alternative methods for suppliers to provide information to users. This information should be used by employers in place of WHMIS MSDSs and labels for the exempted substances. The employer is considered to be in compliance with the training requirements if the employer has obtained the information available under the alternative legislation and has trained workers in the content, purpose and significance of this information. Workers are responsible for participating in the instruction that the employer provides. In addition, workers should inform the employer in any circumstances where they do not have adequate information about a controlled product to ensure their health and safety.

There is no requirement for workers to be “certified” under WHMIS, nor are workers required to have a card or certificate showing they have received training. The employer may develop his or her own program of instruction to best suit the particular workplace and workers.

For more information

 http://employment.alberta.ca/documents/WHS/WHS-PUB_ch007.pdf
WHMIS Information for Workers

 http://employment.alberta.ca/documents/WHS/WHS-PUB_ch008.pdf
WHMIS Information for Employers

Section 398 Label required

The employer must ensure that a WHMIS label is applied to a controlled product when the product enters the workplace. The employer must take measures, through worker education for example, to ensure that supplier labels are not removed, modified, defaced or altered. In facilities where containers may be recycled and reused, the employer must ensure that the original supplier label is removed from the container before the container is reused and that the container is then appropriately labelled (with a work site label) to reflect its contents.

Work site labels must be prepared and applied to containers if an existing supplier label becomes illegible or is accidentally removed and a replacement supplier label is not available. The employer must ensure that a controlled product or the product's container bears a WHMIS label. The employer may be required to affix a label to:

- (a) inner containers if the shipment is multi-container and the employer has agreed in writing with the supplier to apply the labels to the inner containers;
- (b) imported products where the employer has imported the product for use at the employer's workplace (in this case, the employer becomes the product "supplier" and must meet the supplier obligations set out in the *Controlled Products Regulations* for WHMIS labelling and MSDSs); and
- (c) bulk shipments, unless as provided by section 15 of the *Controlled Products Regulations*, the supplier provides an MSDS or statement of label information instead of a supplier label for a controlled product, in which case, the employer may affix a work site label.

The employer must ensure that a controlled product is not used or handled at the workplace until the proper label has been applied. If a controlled product is received from a supplier without the proper label, the employer may store the product only while actively seeking the supplier label information. The employer has 120 days from the day the controlled product is received to obtain the label information.

If the information is not received and a label is therefore not applied within 120 days of receipt of the product, the employer may no longer store the product at the workplace. In this case, the employer may ship the product back to the supplier or properly dispose of the product in accordance with the appropriate environmental legislation. During the 120-day period, the product may be stored with placarding as long as workers working near the storage area have received instruction in the content of the placard, the purpose and significance of the information contained on the placard, and procedures to be followed should the product give off fugitive emissions or in the event of an emergency.

Section 399 Production or manufacture

Where an employer produces a controlled product at the workplace, the employer must develop and apply, at a minimum, a work site label to the product or its container, unless the product is:

- (a) not in a container;
- (b) an intermediary in a reaction;
- (c) a hazardous waste;

- (d) a fugitive emission;
- (e) produced in a laboratory solely for research and development work in the laboratory;
- (f) is in a container or form intended for export; or
- (g) is in a container that is intended for sale or disposition and is, or is about to be (within one work shift), appropriately labelled.

Section 400 Decanted products

This Section presents requirements for the labelling of containers used for decanted products to ensure that controlled products are not handled, used or stored at the workplace in unlabelled containers. However, this section does not apply if the worker requires all of the product for immediate use. "Immediate" means to be used at once, without delay. Labelling is also not required if the product will be under the exclusive control (not used by others) of the worker who filled the container and will be used only during that work shift. At the end of the work shift, the container must be empty. If not, the worker must apply a work site label or empty the contents into an appropriately labelled container.

Section 401 Placards

In some circumstances, the employer is permitted to use a means of identification other than a label to ensure that workers recognize the presence of a controlled product. If the product is not in a container, is intended for export from Canada or is in a container intended for sale to be labelled at a later time (typically more than one work shift later, but without undue delay), the employer may post a placard in the area where the product is stored. The information provided on the placard must be the same as that which would be applied to a work site label. The placard must be sufficiently large and located in a manner to ensure that the information is clear and legible to workers.

Section 402 Transfer of controlled products

Controlled products in storage vessels or transferred in piping within the workplace are additional situations in which other means of labelling may be used. Warning signs, placards, symbols, colour coding, process flow charts or piping diagrams are all examples of the types of labelling that are acceptable if, when

combined with worker education, workers are able to understand the meaning of the system.

An example of a labelling system is presented in the Canadian General Standards Board (CGSB) standard *“Identification of Piping Systems”* (CAN/CGSB-24.3-92). This system uses a combination of colour coding and WHMIS pictograms to label piping. The employer may use this standard to implement a standardized labelling system for piping. However, the standard does not fully address the needs of individuals who are colour blind or illiterate. Alternative means would be necessary to accommodate these individuals. The employer may also develop an in-house labelling system as long as workers are trained to understand the system.

Section 403 Laboratory samples

Laboratory samples are samples containing a controlled product that are intended solely to be tested in a laboratory for purposes such as analysis, research and development. A laboratory sample containing a controlled product for which an MSDS has not been obtained or prepared, and that is packaged in a container that is less than 10 kilograms in size, is exempt from the requirements to display hazard symbols, risk phrases, precautionary measures and first aid statements if other information required by subsection 403(2) is provided.

Where a laboratory sample containing a controlled product is intended for use in research and development, it is recommended that the label include the statement *“Research and Development Sample. For Laboratory Use Only. Echantillon pour Recherche et Développement. Pour Utiliser Seulement Dans un Laboratoire.”* The intent of such a statement is to minimize the likelihood that the sample will be used inadvertently outside the laboratory. To use the modified label, the laboratory sample must be *“of a controlled product”* e.g. sample taken directly from a solid or liquid controlled product or as a gas drawn into a sample cylinder from a pressurized line.

Samples intended for laboratory testing will not always be subject to the requirements of subsection (2). For example:

- (a) samples of decomposition products, oxidized by-products or other altered forms of the controlled product;
- (b) samples of materials that would normally fit into WHMIS Class D, but are not likely to contain a concentration of a controlled product that meets the cut-off criteria of 0.1 or 1 percent for inclusion in WHMIS. (The cut-off of 0.1 percent is used for products that are teratogens, carcinogens, respiratory tract sensitizers, reproductive toxins or mutagens. Otherwise, a cut-off of 1 percent is used unless

a product is listed in the Ingredients Disclosure List at 0.1 percent.) For example, a water sample taken to evaluate contamination by inorganic lead would be unlikely to contain lead above the criterion level of 1 percent;

- (c) samples collected and analyzed within one organization. In these cases, the samples are not “distributed” by a supplier to an employer and are not required to display a supplier label. If the controlled product is tested at an in-house laboratory, the sample label requires a product identifier only.

If a supplier is not certain whether a sample contains a controlled product in sufficient concentration to be included in WHMIS, the following generalizations apply:

- (a) where repeated sampling is done, assessment of the sample can be based on previous results from similar samples; and
- (b) where the sample is suspected of containing a biohazardous infectious material, the sample is considered to fall within WHMIS on the basis of the supplier using information of which the supplier is aware or ought to reasonably be aware of.

Sections 9 and 10 of the *Controlled Products Regulations* provide exemptions to suppliers from providing MSDSs for laboratory samples and products from laboratory supply houses, respectively. A supplier is not required to provide an MSDS for a laboratory sample if it is less than 10 kilograms in size and a label is applied that meets the requirements of section 16 of the *Controlled Products Regulations*.

A supplier is also exempt from providing an MSDS on sale or importation of a controlled product that originates from a laboratory supply house if it is intended for use in a laboratory, is less than 10 kilograms in size and the MSDS information required by sections 13a or 14a of the *Hazardous Products Act* is provided on the label. The information that would normally be on the MSDS would essentially be provided on the label. Since the supplier of these products is exempt from the MSDS requirement under the federal legislation, the employer is exempt from the requirements to obtain and provide an MSDS for these products at the work site.

Section 404 Material safety data sheet — supplier

The employer is responsible for ensuring that a supplier MSDS that complies with the requirements of the *Hazardous Products Act* and the *Controlled Products Regulations* is obtained from a supplier when a controlled product is used at the workplace. This responsibility is not transferable to another organization or agency.

This section allows the employer to store a controlled product at the workplace for 120 days while actively seeking a supplier MSDS. If the MSDS is not received within the 120-day period, the employer may

- (a) develop an MSDS for the product in accordance with the requirements of the *Controlled Products Regulations*;
- (b) ship the product back to the supplier; or
- (c) properly dispose of the product in accordance with applicable environmental legislation.

Section 405 Material safety data sheet — employer

If the employer produces a controlled product at the work site that will be used at the work site, the employer must prepare an MSDS that complies with the requirements set out in the *Controlled Products Regulations* for that product. The exceptions to this are if the controlled product is a fugitive emission or if it is an intermediate in a reaction (a product that is formed and consumed during reaction within the vessel).

If a product is recycled at the work site and its composition/characteristics may change with use, the preparation of an MSDS by the employer will be more complicated. An example of such a situation is where crude petroleum is pumped from the ground and then used and reused as a drilling fluid. Crude petroleum fits the definition of a complex mixture and there are generic MSDSs available for the product. However, the hazardous properties of the product e.g. flash point, vapour pressure, hydrogen sulphide content, benzene content, etc. vary within a wide range from field to field and even within the same oil field.

The use of a generic MSDS may not be specific enough to provide the necessary hazard information to workers. While it is possible that some crude oils will not meet the definition for a controlled product as they do not fall into one or more of the six WHMIS hazard classes, most will because of their flammable or combustible characteristics or their toxic properties. It is therefore assumed that any crude petroleum used at the workplace will be regulated by WHMIS unless the employer or supplier can produce test results showing that their particular crude is not. A generic MSDS will only be acceptable where it is supplemented by hazard information applicable to the specific product at the workplace. For example, if the generic MSDS has a flash point ranging from the flammable to combustible temperatures, it must be supplemented with the actual flash point of the product. The same situation applies to the use and reuse of drilling muds at well sites.

The employer may produce and make readily available a substitute MSDS as long as it contains no less information than the supplier's MSDS and the supplier's MSDS is available at the workplace. The advantage of this is the ability to include local regulatory requirements such as exposure limits and the incorporation of information about hazards and control measures specific to circumstances at the work site. The content of the employer MSDS must cover the items specified in section 12 and schedule 1 of the *Controlled Products Regulations*. The employer may also provide additional information if it is provided on the original supplier's MSDS or add other hazard information of which the employer is aware regarding the product.

Simplification of the supplier MSDS is acceptable as long as the intent of the supplier's MSDS is not altered. However, the perceived level of risk may not be reduced. For example, if the supplier reports the results of a number of oral LC₅₀ tests, the employer may summarize the information by reporting the LC₅₀ for the most toxic effect and referring to the fact that the result was one of a series of tests.

If the employer chooses to use a standard format MSDS that displays all of the information items in schedule 1 of the *Controlled Products Regulations* and the supplier's MSDS does not provide information for one or more of those items, it is not appropriate to enter the expressions "Not Available" or "Not Applicable" unless the employer has searched reasonably available information sources, including making contact with the supplier, and has confirmed that the expressions apply. Items may not be left blank.

Disclaimer statements provided on supplier MSDSs do not enhance the information provided and need not be reproduced on the employer MSDS. Disclaimer statements that contradict information on the MSDS are prohibited by section 25 of the *Controlled Products Regulations*, and such statements and any other contradictory information must not be reproduced. The employer must reproduce the Preparation Information provided on the supplier MSDS. The employer MSDS may, but is not required to, show information about who prepared the employer MSDS and the date of preparation. The employer MSDS must indicate that the supplier's MSDS is available at the workplace.

In some cases, the employer may wish to combine the MSDSs of identical products from more than one supplier to produce a "composite MSDS". For example, the employer may purchase one chemical from several suppliers. This MSDS must contain all of the information from each of the supplier's MSDSs. The composite MSDS must include all discrete trade names or other identifiers that appear on the supplier MSDS. The composite MSDS must identify beside each of these the supplier name and telephone number as well as the person responsible for preparing the MSDS and its preparation date. If more than one use is identified on

the separate MSDSs, all uses must be reflected on the composite MSDS. Precautionary measures specific to different uses must also be identified in this way. The composite MSDS must meet all the other requirements for the content of an employer-produced MSDS.

Where an employer has produced an MSDS to replace a supplier MSDS, the original supplier MSDS must be located within the company and be available at the work site. This means that the MSDS must be available to workers in hard copy either through an internal mail system, facsimile transmission or through a computer workstation within 24 hours of a request.

Section 406 Information current

The employer must update or obtain a new MSDS when the preparation date of the sheet is more than three years old. However, according to the *Hazardous Products Act*, the supplier is under no obligation to provide a new MSDS if there has been no new sale of the product. Despite this, most suppliers are prepared to send an updated MSDS or, alternatively, may be willing to send a letter to the employer listing their products for which there has been no change to the MSDS.

If an employer cannot obtain an up-to-date MSDS from a supplier and the information contained in the MSDS has not changed, the employer can meet their obligations under section 406 if

- (a) the employer obtains a letter from the supplier indicating that there has been no change in the information contained in the MSDS;
- (b) the letter received must be typed on the supplier's letterhead;
- (c) the letter received must be physically attached to the old MSDS at the work site;
- (d) the letter must specifically identify the controlled product; and
- (e) there has been no new sale of the product.

If the updated information cannot be obtained from the supplier, the obligation to update the MSDS then falls on the employer. The employer must review and revise the MSDS by completing a literature review or with current information from the manufacturer.

Where an employer prepares an MSDS for a product made and used at the employer's work site, the employer is responsible for reviewing and updating the information as appropriate. The MSDS must be updated within 90 days of new information becoming available, and at least every three years. "Available" means that the person responsible for preparing the MSDS has the information or could reasonably obtain it.

While the employer may not have tested the product, test results may be available from others who manufacture and use the product elsewhere. A reasonable search of the available literature must be done as well. The applicable information to be added is information relevant to the safe handling, storage, use or disposal of the product. Careful professional judgment must be used when determining applicability.

Section 407 Availability of material safety data sheet

MSDSs must be readily available to workers at the work site. "Readily available" is interpreted to mean that the MSDS is located near workers in physical copy form and accessible to workers during each shift. Workers are not required to work with the product until they see the MSDS, if they wish to do so.

MSDSs may be made readily available to workers via an electronic storage and retrieval system if

- (a) the system is available for use during all workshifts,
- (b) a trained operator is available on each shift to retrieve the information or, alternatively, all workers are trained to retrieve the information,
- (c) the system is provided at all work sites, and
- (d) the system is capable of providing paper copies of MSDSs.

Hard copies of MSDSs must be at all work sites, including mobile work sites, unless the employer can demonstrate an equivalent means of providing this information (for example, electronic storage and retrieval). It is not acceptable to have the worker call in and have information read over the telephone.

Section 408 Claim for disclosure exemption

There may be situations where the release of certain information regarding a controlled product may result in financial loss to the supplier or employer relative to its competitors. Such information is termed confidential business information and is generally considered to be technical information about a product or its manufacturing process that has economic value or advantage and is known only to the producer or supplier. WHMIS provides a mechanism that allows employers to withhold genuine confidential information under certain circumstances.

An employer may obtain an exemption from disclosing

- (a) the chemical identity or concentration of an ingredient in a controlled product,
- (b) the name of a toxicological study that identifies the ingredient of a controlled product,
- (c) the identity (chemical name, common name, generic name, trade name or brand name) of a controlled product, or
- (d) information that could be used to identify the supplier of a controlled product.

Note that the exemption does not apply to other types of information required on the MSDS such as hazard information.

When a claim is filed with the Hazardous Materials Information Review Commission (HMIRC), four criteria are considered when determining whether a claim of confidential business information is valid:

- (1) *The information must be known only to designated persons.* Information about the product must be known only to certain designated persons who have been employed by or are in a business relationship with the employer, government officials to whom the information has been disclosed in compliance with regulatory reporting requirements, and medical professionals to whom the information has been disclosed for the purpose of medical diagnosis or treatment.
- (2) *The employer must have taken reasonable care to maintain confidentiality of information.* This includes alerting workers and business associates who are aware of the information that it must be considered confidential.
- (3) *The information must have economic value to the employer or competitors* since it is not generally known and because disclosure would result in material financial loss to the employer or material financial gain to competitors.
- (4) *The information must represent a significant development cost to the firm.* The money spent and business resources used to develop the information must be substantial and consistent with the cost and resources to develop similar information in the same industry.

If an employer files a claim for exemption to disclose confidential business information, the employer is permitted to delete the information from the MSDS or label, as applicable, on three conditions:

- (1) The deleted information must be of the type permitted. Information, such as physical data, hazard information, preventative measures and first aid information may not be claimed as confidential.

- (2) Where the subject of the claim is the chemical identity of a controlled product or any ingredient of a controlled product, the employer must disclose the generic chemical identity of the product or ingredient with as much precision as is consistent with the exemptions (*Hazardous Products Act*, Section 16). “Generic chemical identity” is the generic chemical class or category that is no broader than necessary to protect the specific chemical identity from disclosure and which is structurally descriptive of the chemical claimed as confidential business information. The functional identity of a product is not adequate. For example, an appropriate generic chemical identity for hydrochloric acid is “inorganic acid”.

Where several ingredients are exempt from disclosure and can be described with one generic chemical identity, the employer may use the one identity as long as it describes each of the ingredients with as much precision as is consistent with the exemption. For example, if disclosure exemptions were provided for the ingredients hexane, heptane and octane in a controlled product, the employer could use, in place of three generic chemical identities, the identifier “saturated aliphatic hydrocarbons”. The identity of the product may be provided as a code name or code number. The concentration or concentration range (as specified by Section 11 of the *Controlled Products Regulations*) must still be provided for the ingredient.

- (3) The employer must include additional claim information on the MSDS and/or labels, where applicable.

Section 409 Interim non-disclosure

Once a claim for exemption to disclose confidential business information has been filed with HMIRC, the employer must disclose the date when the claim was filed and the registry number assigned by HMIRC to the claim on the MSDS and product labelling.

Section 410 Exemption from disclosure

When a claim for an exemption to disclose confidential business information is determined to be valid by HMIRC, the employer must revise the MSDS and label within 30 days of final disposition of the claim. The information that must be included, in place of the date the claim was filed, is a statement that an exemption

was granted, the date of the decision and registry number assigned to the claim. The date of final disposition is, where there is no appeal of the decision, the date of expiry of the appeal period. Where there is an appeal of a decision, it is the date of expiry of the appeal period that applies to the decision on the first appeal (unless that decision is appealed). Claims that are approved by HMRIC may include an order for changes to the MSDS and/or label. These changes must be made unless successfully appealed.

Section 411 Duty to disclose information

This section requires the employer to disclose the source of toxicological data used in preparing the MSDS to an occupational health and safety officer, any concerned worker or the joint work site health and safety committee. In the absence of a joint work site health and safety committee, the information can be disclosed to a representative of concerned workers.

Section 412 Information confidential

There are circumstances where information that is the subject of an exemption for disclosure must be disclosed.

- (1) Employers must provide information about a controlled product to a medical professional who requests that information for the purpose of medical diagnosis or treatment of a person in an emergency.
- (2) When there is an appeal, the Appeal Board established under the *Hazardous Materials Information Review Act* may order a claimant to disclose in confidence to one or more affected parties, information related to the subject matter of the appeal if, in the opinion of the Appeal Board, the information should be disclosed to protect health and safety at a workplace.
- (3) In addition, confidential business information must be provided to any official of
 - (a) Health Canada or a designated federal WHMIS inspector from Alberta Human Resources and Employment, for the purposes of administration or enforcement of Part II of the *Hazardous Products Act*;
 - (b) Human Resources and Development Canada for the purpose of the administration or enforcement of Part IV of the *Canada Labour Code*;

- (c) Department of Transportation for the purpose of making information available in cases of medical emergency through the Canadian Transport Emergency Centre; and
- (d) Alberta Human Resources and Employment for the purpose of administration or enforcement of provincial legislation related to occupational health and safety.

In all cases, where confidential business information is disclosed, recipients must keep the information confidential. The *Hazardous Materials Information Review Act* provides for penalties in the event of contravention of any provision of the *Act*, including unauthorized disclosure of information.

Section 413 Information to medical professional

Employers must provide information about a controlled product to a medical professional who requests that information for the purpose of medical diagnosis or treatment of a person in an emergency. The federal legislation also allows an officer of HMIRC to communicate information received from an employer regarding a claim for confidential business information to a medical professional who requests that information for the purpose of diagnosis or treatment of a person in an emergency. The medical professional must also maintain confidentiality of the information, except where the information is needed for medical treatment.

Section 414 Limits on disclosure

No explanation required.