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Back to top The purpose of the Transportation of Dangerous Goods (TDG) Act and Regulations is to promote public safety when dangerous goods are being imported, offered for transport, handled, or transported by road, rail, air, or water (marine). TDG also establishes safety requirements.Note: The information below is provided as guidance only and is for the transportation of dangerous goods by road. Always check the TDG Act and Regulations to ensure compliance.Please also see the following documents in this series: Back to top Dangerous goods are classified into 9 classes, based on the substances characteristics and properties. These criteria are outlined in the TDG Regulations.Assigning a substance into a hazard class is usually done by the consignor. The person deciding the classification must be competent, meaning they have the education, training, and experience required for the task. Some substances have been assigned classes in the TDG Regulations.For more information on how classification works, please see OSH Answersinclude. Back to top Always consult the TDG Regulations for full details on classes, divisions, and exemptions. This table provides a general overview of each class.ClassHazardExamplesClass 1 ExplosivesThere are six divisions in this category. To be included, the substance or article has the ability to be a mass explosion, fragment projection, fire hazard (along with a minor blast or projection hazard), may ignite or initiate during transport, be very insensitive with a mass explosion hazard, or extremely insensitive with no mass explosion hazard.Ammonium picrateCartridges for weapons (with specific characteristics)Ammunition, Smoke, White PhosphorusPyrotechnic substances (e.g., Safety Devices, Pyrotechnic)Signals, DistressClass 2 GasesThere are three divisions: flammable gases, non-flammable and non-toxic gases, and toxic gases.Aerosols under UN 1950, AEROSOLS may be transported as flammable or non-flammable or non-toxic gases, depending on the properties of the aerosol.PropaneNitrogen, compressedNitrogen, refrigerated liquidCarbon dioxideAir, compressedSulfur hexafluorideLiquefied petroleum gasHydrogen sulfideClass 3 Flammable LiquidsBased on a liquids flash point and other properties, substances are included in this class if they are expected to be able to catch fire at common temperatures.GasolineDieselKeroseneEthanol solutionClass 4 Substances/ Products include: Flammable Solids; Substances Liable to Spontaneous Combustion; Substances That on Contact with Water Emit Flammable Gases (Water-reactive Substances)Class 4 has three divisions: flammable solids, substances liable to spontaneous combustion, and water reactive substances.These substances may cause fire (through friction), become explosive when in contact with water, become explosive even with contact with oxygen (air), or undergo a reaction that will result in a stronger exothermic reaction (a reaction that releases heat). For example, Class 4.2 Substances liable to spontaneous combustion includes substances that will ignite within 5 minutes of coming into contact with air.SulphurSafety matchesNaphthalene, crudeNaphthalene, refinedCarbon, activatedCalcium carbideClass 5 Oxidizing Substances including Organic PeroxidesThe two divisions are oxidizing substances and organic peroxides.These substances may explosively decompose, burn rapidly, be sensitive to impact or friction, react dangerously with other substances, or cause damage to the eyes.Ammonium nitrate-based fertilizerCalcium peroxideOrganic Peroxide Type C, LiquidClass 6 Toxic and Infectious SubstancesThe two divisions are toxic substances and infections substances.Substances are included in class 6 if they can cause death or serious injury or harm to human health if swallowed, inhaled, or in contact with skin.Medical or clinical waste may also be classified as an infectious substance if they contain regulated properties.Toxic substances examples:StrychnineArsenicChloroformPhenol, solidInfectious substances examples:Bacteria such as AnthracisViruses such as HantavirusClass 7 Radioactive MaterialsCategory I WhiteCategory II YellowCategory III - YellowFissile MaterialRadioactive materials are classified in accordance with the Packaging and Transport of Nuclear Substances Regulations 2015.Class 7 Radioactive material has no divisions or packing groups. Instead, there are three categories based on the maximum radiation dose exposure from the packages. The three categories are identified with the following labels:Radioactive White-I low hazardRadioactive Yellow-II moderate hazardRadioactive Yellow-III high hazardRadioactive materials emit invisible radiation that can cause serious health effects.High radiation levels can cause reduced blood count, nausea, fatigue, hair loss, etc. Small amounts of radiation received over a long period may cause long-term health effects such as cancer and genetic mutations.Radioactive material, Type B(M) Package, FissileClass 8 Corrosive SubstancesThere are no divisions in this class. Substances are included in Class 8 if they are known to cause injury to the skin such as burns, destruction (thickness), or lesions. Substances that cause corrosion of steel or aluminum surfaces are also included in this TDG class.Acetic acid, solution (10 to 50%)Sulphuric acid, spentBattery fluid, acidBattery fluid, alkaliClass 9 Miscellaneous Products, Substances or OrganismsClass 9 Lithium batteriesSubstances are considered Class 9 when they are listed in column 3 of Schedule 1 in the TDG Regulation, or by other inclusions and exclusions as defined in the regulations.Substances include those that present a danger sufficient to be included in the TDG regulations, but which cannot be assigned to any other class.Carbon dioxide, solid (Dry Ice)Lithium cells and batteriesLiquid substances transported at or above 100 degrees CSolid substances transported at or above above 240 degrees C Back to top Recently, the TDG Regulations were amended. The definition of dangerous goods safety mark was withdrawn from the TDG Regulations. However, the TDG regulations and many Transport Canada publications still refer to the former terminology of dangerous goods safety marks. Thus, we include both terms in our OSH Answers fact sheet.The TDG Act defines a dangerous goods mark as a symbol, device, sign, label, placard, letter, word, number or abbreviation, or any combination of those things, that is to be displayed to indicate the presence or nature of danger on dangerous goods, or on a means of containment or means of transport used in importing, offering for transport, handling or transporting dangerous goods.The size, shape and colour of the required dangerous goods marks or dangerous goods safety marks are outlined in the TDG Regulations.The following table shows common dangerous goods marks or dangerous goods safety marks for each class. To view all the required dangerous goods marks or dangerous goods safety marks, please see the Appendix in Part 4 of the TDG Regulations.ClassSample Dangerous Goods Mark(s) or Dangerous Goods Safety Mark(s)Class 1 ExplosivesSample shows: Class 1.1., 1.2 and 1.3Class 2 GasesSamples show: Class 2.1 Flammable gases; Class 2.2 Non-flammable and non-toxic gases; Class 2.3 Toxic gases, and Class 2 dangerous goods mark with yellow background for oxidizing gasesClass 3 Flammable LiquidsSample shows: Class 3 Flammable liquidsClass 4 Substances/Products include: Flammable Solids; Substances Liable to Spontaneous Combustion; Substances That on Contact with Water Emit Flammable Gases (Water-reactive Substances)Sample shows: Class 4.1 Flammable solidsClass 5 Oxidizing Substances, including Organic PeroxidesSample shows: Glass 5.1 Oxidizing substancesClass 6 Toxic and Infectious SubstancesSamples show: Class 6.1 Toxic substances; Class 6.2 Infectious substancesClass 7 Radioactive MaterialsCategory I WhiteCategory II YellowCategory III - YellowFissile MaterialSample shows: Class 7 Radioactive materials,Category IWhiteClass 8 Corrosive SubstancesSample shows: Class 8 CorrosivesClass 9 Miscellaneous Products, Substances or OrganismsSamples show:Class 9 Miscellaneous Products, Substances or Organisms;Class 9 Lithium Batteries Fact sheet first published: 2021-02-15 Fact sheet last revised: 2025-01-21 Back to top Canada has aligned the Workplace Hazardous Materials Information System (WHMIS) with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).This document discusses the WHMIS supplier requirements as regulated by federal legislation the Hazardous Products Act and the Hazardous Products Regulations (HPR). This document reflects the Hazardous Products Regulations requirements as of December 15, 2022. The changes introduced in December 2022 are in force. Suppliers are granted a 3-year transition period (to December 15, 2025) to bring product classifications, safety data sheets and labels into compliance with the amendments. For most workplaces, the most notable impact will be seen in the changes to the flammable gases class and the new class of chemicals under pressure.Health Canada is the government body responsible for the overall WHMIS supplier-related laws. Note that WHMIS is also regulated in the workplace by the provinces, territories and federal (for federally regulated workplaces) governments under their occupational health and safety legislation. While these jurisdictions based their WHMIS regulations on a common model, small variations between jurisdictions may exist.Suppliers and employers must use and follow the WHMIS requirements for labels and safety data sheets (SDSs) for hazardous products sold, distributed, or imported into Canada.Please refer to the following OSH Answers documents for information about WHMIS: Back to top Suppliers must determine if their products meet the various physical and health properties that areregulated by the Hazardous Products Act and regulations. The specific criteria is listed in the Hazardous Products Regulations. If the product meets any of the criteria for a hazard class, it is considered to be a WHMIShazardous product.The official definitionof a hazardous product is "any product, mixture, material or substance that is classified in accordance with the regulations made under subsection 15(1) in a category or subcategory of a hazard class listed in Schedule 2; (produit dangereux)."All hazardous products must be labelled according to the Hazardous Products Regulations and must have a corresponding safety data sheet provided to the purchaser at the time of sale.Employers who produce hazardous products for use in their own workplaces have the duty to assess the hazards, classify the hazards of the products, and provide appropriate labels and safety data sheets to their workers.Tools to help with classification, such as theTechnical Decision Treesand guidance for classification, are available fromwhmis.organd Health Canada.Please see the OSH Answers on WHMIS Labels and WHMIS Safety Data Sheets (SDSs) for more information. Back to top WHMIS applies to two major groups of hazards: physical and health. Each hazard group includes hazard classes that have specific hazardous properties.Physical hazards group: based on the product's physical or chemical properties, such as flammability, reactivity, or corrosivity to metals.Health hazards group: based on the ability of the product to cause a health effect, such as eye irritation, respiratory sensitization (may cause allergy or asthma symptoms or breathing difficulties if inhaled), or carcinogenicity (may cause cancer).The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) also defines an Environmental hazards group. This group (and its classes) was not adopted in WHMIS. However, you may see the environmental classes listed on labels and Safety Data Sheets (SDSs). Including information about environmental hazards is allowed by WHMIS. Back to top Hazard classes are a way of grouping together products that have similar properties. Most of the hazard classes are common to GHS and will be used worldwide by all countries that have adopted GHS. Some hazard classes are specific to WHMIS.List of Hazard ClassesPhysical Hazard ClassesFlammable gases (including pyrophoric gases and chemically unstable gases) AerosolsOxidizing gasesGases under pressureFlammable liquidsFlammable solidsSelf-reactive substances and mixturesPyrophoric liquidsPyrophoric solidsSelf-heating substances and mixturesSubstances and mixtures which, in contact with water, emit flammable gasesOxidizing liquidsOxidizing solidsOrganic peroxidesCorrosive to metalsCombustible dustsSimple asphyxiantsPhysical hazards not otherwise classifiedChemicals under pressureHealth Hazard ClassesAcute toxicitySkin corrosion/irritationSerious eye damage/eye irritationRespiratory or skin sensitizationGerm cell mutagenicityCarcinogenicityReproductive toxicitySpecific target organ toxicity single exposureSpecific target organ toxicity repeated exposureAspiration hazardBiohazardous infectious materialsHealth hazards not otherwise classifiedNote: GHS also defines an Explosive class and the Environmental Hazards group (not mandatory). The WHMIS regulations do not currently include the Explosives hazard class. Explosives are covered by other legislation in Canada. Back to top Each hazard class contains at least one category. The hazard categories are assigned a number (e.g., 1, 2, etc.). Categories may also be called "types". Types are assigned an alphabetical letter (e.g., A, B, etc.). In a few cases, sub-categories are also specified. Subcategories are identified with a number and a letter (e.g., 1A and 1B).Some hazard classes have only one category (e.g., corrosive to metals). Others may have two categories (e.g., carcinogenicity (cancer)) or three categories (e.g., oxidizing liquids). There are a few hazard classes with five or more categories (e.g., organic peroxides).The category tells you about how hazardous the product is (that is, the severity of the hazard).Category 1 is always the greatest level of hazard (that is, it is the most hazardous within that class). If Category 1 is further divided, Category 1A within the same hazard class is a greater hazard than category 1B.Category 2 within the same hazard class is more hazardous than category 3, and so on.There are a few exceptions to this rule. For example, for the Gases under pressure hazard class, the hazard categories are "Compressed gas", "Liquefied gas", "Refrigerated liquefied gas" and "Dissolved gas". These classes relate to the physical state of the gas when packaged and do not describe the degree of hazard.In addition, the Reproductive Toxicity hazard class has a separate category called "Effects on or via lactation". "Effects on or via lactation" was not assigned a specific numbered category. Reproductive toxicity also has Categories 1 and 2, which relate to effects on fertility or on the unborn child. Effects on or via lactation are considered a different but related hazard within the Reproductive toxicity class. Back to top The key changesin the December 2022 amendments of the Hazardous Products Regulations include:Adoption of a new physical hazard class: Chemicals Under PressureA change in the name of the physical hazard class Flammable Aerosols to AerosolsA new hazard category for non-flammable aerosols (Aerosols Category 3)A split in the hazard category Flammable Gases Category 1 into Categories 1A and 1BInclusion of Pyrophoric gases under Flammable gases Category 1A instead of being its own hazard class.Inclusion of Chemically Unstable Gases into the new Flammable gases Category 1AMixtures that are classified in one of the health hazard classes that include both categories and subcategories may be classified in an applicable subcategory when there is sufficient data available to do so.The classification criteria for water-activated toxicants have changed to be based on the acute inhalation toxicity of the substance or mixture as sold or imported.The classification criteria for Reproductive Toxicity Category 2 has been corrected to specify that adverse effects observed in humans or animals must not be considered as a secondary non-specific consequence of other toxic effects. Back to top Hazard ClassGeneral DescriptionFlammable gasesAerosolsFlammable liquidsFlammable solidsThese four classes cover products that can ignite (catch fire) easily. The main hazards are fire or explosion.Note:The hazard class under Flammable gases Category 1A includes Pyrophoric gases and Chemically Unstable Gases.The hazard class Aerosols also includes a category for non-flammable aerosols (for products that may be a hazard if they burst when heated).Oxidizing gasesOxidizing liquidsOxidizing solidsThese three classes cover oxidizers, which may cause or intensify a fire or cause a fire or explosion.Gases under pressureThis class includes compressed gases, liquefied gases, dissolved gases and refrigerated liquefied gases.Compressed gases, liquefied gases and dissolved gases are hazardous because of the high pressure inside the cylinder or container. The cylinder or container may explode if heated. Refrigerated liquefied gases are very cold and can cause severe cold (cryogenic) burns or injury.Self-reactive substances and mixturesThese products may react on their own to cause a fire or explosion or may cause a fire or explosion if heated.Pyrophoric liquidsPyrophoric solidsThese products can catch fire very quickly (spontaneously) if exposed to air.Note: Pyrophoric gases are now included in the hazard category Flammable gases Category 1ASelf-heating substances and mixturesThese products may catch fire if exposed to air. These products differ from pyrophoric liquids or solids in that they will ignite only after a longer period of time or when in large amounts.Substances and mixtures which, in contact with water, emit flammable gasesThese products react with water to release flammable gases. In some cases, the flammable gases may ignite very quickly (spontaneously).Organic peroxidesThese products may cause a fire or explosion if heated.Corrosive to metalsThese products may be corrosive (chemically damage or destroy) to metals.Combustible dustsThis class is used to warn of products that are finely divided solid particles. If dispersed in air, the particles may catch fire or explode if ignited.Simple asphyxiantsThese products are gases that may displace oxygen in the air and cause rapid suffocation.Physical hazards not otherwise classifiedThis class is meant to cover any physical hazards that are not covered in any other physical hazard class. These hazards must have the characteristic of occurring by chemical reaction and result in the serious injury or death of a person at the time the reaction occurs. If a product is classified in this class, the hazard statement on the label and SDS will describe the nature of the hazard.Chemicals under pressureThis class includes liquids or solids that are packaged in a receptacle - other than an aerosol dispenser - and that are pressurized with a gas at a gauge pressure of 200 kPa or more at 20C but excludes any Gasunder pressure as defined by the Hazardous Products Regulations. Back to top Hazard ClassGeneral DescriptionAcute toxicityProducts classified in this hazard class are fatal, toxic or harmful if inhaled, following skin contact, or if swallowed.Acute toxicity refers to effects occurring following skin contact or ingestion exposure to a single dose, or multiple doses given within 24 hours, or an inhalation exposure of 4 hours.Acute toxicity could result from exposure to the product itself, or to a product that, upon contact with water, releases a gaseous substance that is able to cause acute toxicity.Skin corrosion / irritationThis class covers products that cause severe skin burns (i.e., corrosion, ulcers, bleeding, bloody scabs, etc.) or products that cause skin irritation (reversible damage).Serious eye damage / eye irritationThis class covers products that cause serious eye damage (i.e., tissue damage in the eye or serious physical decay of vision) or products that cause eye irritation (reversible damage).Respiratory or skin sensitizationA respiratory sensitizer is a product that may cause allergy or asthma symptoms or breathing difficulties if inhaled (hypersensitivity). Skin sensitizer is a product that may cause an allergic response after skin contact.Germ cell mutagenicityThis hazard class includes products that may cause or are suspected of causing heritable gene mutations (permanent changes (mutations) to body cells that can be passed on to future generations).CarcinogenicityThis hazard class includes products that may lead to cancer or may increase the incidence of cancer.Reproductive toxicityThis hazard class includes products that may damage or are suspected of damaging sexual function and fertility, have adverse effects on the unborn child (embryo, fetus, or offspring), or may have an effect on or through lactation (such as to cause harm to breast-fed children).Specific target organ toxicity single exposureThis hazard class covers products that cause or may cause damage to organs (e.g., liver, kidneys, or blood) following a single exposure.This class also includes a category for products that cause respiratory irritation or drowsiness or dizziness.Specific target organ toxicity repeated exposureThis hazard class covers products that cause or may cause damage to organs (e.g., liver, kidneys, or blood) following prolonged or repeated exposure.Aspiration hazardAspiration is defined as the entry of a liquid or solid into the trachea or lower respiratory system directly though the oral or nasal cavity, or indirectly by vomiting. In other words, aspiration occurs when instead of something going from your mouth or nose to your stomach (other than air), it enters the lungs. Serious health effects can occur such as chemical pneumonia, injury to the lungs, and death.Biohazardous infectious materialsThese materials are microorganisms, nucleic acids or proteins that cause or are a probable cause of infection, with or without toxicity, in humans or animals.Health hazards not otherwise classifiedThis class covers hazards that are not included in any other health hazard class. These hazards occur following acute or repeated exposure and have an adverse effect on the health of a person exposed to them. The adverse effects include injuries or death of that person. If a product is classified in this class, the hazard statement will describe the nature of the hazard. Back to top All hazardous products must be labelled according to the regulations, and must have a corresponding Safety Data Sheet (SDS). The hazard class and category will be provided in Section 2 (Hazard Identification) of the SDS. Each hazard class or category must use specific pictograms and other label elements to indicate the hazard that is present and what precautionary measures must be taken. Use the information provided by the label and SDS to be informed and to know how to safely use, handle, store and dispose of the hazardous product. Fact sheet last revised: 2025-06-02 Back to top Canada has aligned the Workplace Hazardous Materials Information System (WHMIS) with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).This document discusses the WHMIS supplier requirements as regulated by the federal legislation the Hazardous Products Act (HPA) and the Hazardous Products Regulations (HPR). This document reflects the Hazardous Products Regulations requirements as of December 15, 2022. The changes introduced in December 2022 are in force. Suppliers are granted a 3-year transition period (to December 15, 2025) to bring product classifications, safety data sheets and labels into compliance with the amendments. For most workplaces, the most notable impact will be seen in the changes to the flammable gases class, and the new class of chemicals under pressure.Health Canada is the government body responsible for the overall WHMIS supplier-related laws. WHMIS is also regulated in the workplace by the provinces, territories and federal (for federally regulated workplaces) governments under their occupational health and safety legislation. While these jurisdictions based their WHMIS regulations on a common model, small variations between jurisdictions may exist.Suppliers and employers must use and follow the WHMISrequirements for labels and safety data sheets (SDSs) for hazardous products sold, distributed, or imported into Canada.Please refer to the following OSH Answers documents for more information about WHMIS: Back to top Yes. WHMIS first became law in 1988 through a series of complementary federal, provincial and territorial legislation and regulations. This original system is identified as WHMIS 1988.To align with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), the Hazardous Products Regulations were published in Canada Gazette, Part II on February 11, 2015. This WHMIS system was identified as WHMIS 2015.Updates to the Hazardous Products Act and regulations came into force on December 15, 2022. Suppliers are granted a 3-year transition period (to December 15, 2025) to bring product classifications, safety data sheets and labels into compliance with the amendments. This WHMIS system is identified as amended WHMIS and WHMIS 2015 is now referred to as former WHMIS. Back to top WHMIS requirements are implemented through coordinated and interlocking Health Canada and federal, provincial and territorial occupational health and safety laws. WHMIS is enforced by the provincial or territorial government departments or agencies responsible for health and safety, or by the Labour Program for federally regulated workplaces. Back to top Inspectors (sometimes called officers) from provincial, territorial, or federal government departments responsible for health and safety have the authority to make sure that the employer requirements specified in their occupational health and safety legislation are being followed.In addition, some inspectors are trained and designated by Health Canada to conduct inspections and enforce compliance with the supplier requirements of theHazardous Products Act(HPA) and theHazardous Products Regulations(HPR).Hazardous Products Act(HPA) Inspectors may enter a workplace if they have reasonable grounds to believe that:an activity related to WHMIS is being conducted at that place; ora thing to which the legislation relates (for example a hazardous product) is located in that place.Suppliers of hazardous products may, for example, be asked to demonstrate that they are preparing and maintaining:true copies of labels and safety data sheets in both official languages, anddocuments detailing the required sales and purchasing information.labels and safety data sheets compliant with the Hazardous Products Actand theHazardous Products Regulations.As part of a workplace health and safety inspection, inspectors may be seeking to know if products are arriving from suppliers with the required labels and safety data sheets. Inspectors may also examine safety data sheets and labels to verify compliance with the requirements of the WHMIS legislation.In other cases, they may be determining if there is a compliant WHMIS program in the workplace.For specific WHMIS-related questions, employers should, for example, be prepared to:Demonstrate that a WHMIS program is in place.Show where the safety data sheets are for the hazardous products used at that workplace.Show that hazardous products at the workplace have the appropriate labels.Show education and training records for workers who work with or may be exposed to a hazardous product.Inspectors may need to speak to workers to confirm that education and training has taken place. Workers should be able to answer these questions for every hazardous product they work with:What are the hazards of the product?How do I protect myself from those hazards?What do I do in case of an emergency?Where can I get further information? Back to top All Canadian jurisdictionsrequire that employers:develop, implement, and maintain a worker education and training program that covers the hazards and safe use of all chemical products used in the workplace.ensure that hazardous products are properly labelled, including preparing workplace labels, as needed.provide access to up-to-date safety data sheets to workers, including preparing safety data sheets if necessary (e.g., if an employer manufactures a hazardous product that is used on-site)ensure that appropriate control measures are in place to protect the health and safety of workers.Below is a table for guidance purposes that lists the legislation and who enforces WHMIS for each jurisdiction across Canada.Always consult the legislation that applies in your situation and with yourjurisdictionfor complete information. See whmis.org for links to the specific legislation for your jurisdiction.Table 1Main Sources of WHMIS Legislation in CanadaJurisdictionLegislationEnforced byAlbertaOccupational Health and Safety ActOccupational Health and Safety RegulationOccupational Health and Safety Code(Part 29)Ministry of Jobs, Economy and Trade,Occupational health and safety (OHS) DivisionBritish ColumbiaWorkers Compensation ActOccupational Health and Safety Regulation(Sections 5.3 to 5.19)WorkSafeBCCanadaHazardous Products Act and Hazardous Products RegulationsHealth Canada and Health Canada-designated inspectorsCanada (for federally-regulated work places)Canada Labour Code, Part IICanada Occupational Health and Safety Regulations(Part X, Division III)Employment and Social Development Canada (ESDC) Labour ProgramManitobaThe Workplace Safety and Health ActThe Workplace Safety and Health Regulation(Part 35)Manitoba Labour and Immigration, Workplace Safety and HealthNew BrunswickOccupational Health and Safety ActWorkplace Hazardous Materials Information System RegulationWorkSafeNBNewfoundland and LabradorOccupational Health and Safety ActWHMIS RegulationsService NL, Occupational Health and Safety DivisionNorthwest Territories and NunavutNorthwest Territories - Safety ActNorthwest Territories Occupational Health and Safety Regulations, Amendment(Part 22)Nunavut Consolidation of Safety ActNunavut Consolidation of Occupational Health and Safety Regulations(Part 22)Workers' Safety & Compensation Commission (WSCC)Nova ScotiaHealth and Safety ActWorkplace Health and Safety Regulations(Part 3)Department of Labour, Skills and ImmigrationOntarioOccupational Health and Safety ActREGULATION 860 Workplace Hazardous Materials Information System (WHMIS)Ministry of Labour, Immigration, Training and Skills DevelopmentPrince Edward IslandOccupational Health and Safety ActWorkplace Hazardous Materials and Information System RegulationsWorkers Compensation Board (WCB) of PEIQuebecAn Act Respecting Occupational Health and Safety (AROHS) (R.S.Q., c. S-2.1)Hazardous Products Information Regulation (S-2.1, r.8.1)Commission des normes, de l'quit, de la sant et de la scurit du travail (CNESST)SaskatchewanThe Saskatchewan Employment Act(Part III, Division 7, sections 3-47 to 3-51)The Occupational Health and Safety Regulations(Part 22)WorkSafe Saskatchewan(partnership between the Saskatchewan Workers' Compensation Board (WCB) and the Ministry of Labour Relations and Workplace Safety (LRWS))Yukon TerritoryWorkers' Safety and Compensation ActWHMIS RegulationsWorkers Safety and Compensation Board Fact sheet first published: 2025-05-15 Fact sheet last revised: 2025-05-15 Back to top CAS Registry No.: 14808-60-7Other Names: Crystalline silica, Quartz; Silicone dioxide; TripoliMain Uses: Many uses including in mining, fabrication, manufacturing, and constructionAppearance: Colourless crystals.Odour: OdourlessCanadian TDG: Not specifically listed in Canadian TDG Regulations, but may be regulated as part of a chemical family or group Not Otherwise Specified (N.O.S.). Consult the regulations. Back to top According to the Commission des normes, de l'quit, de la sant et de la scurit du travail (CNESST), silica (quartz) can be classified as:Carcinogenicity - Category 1ASpecific target organ toxicity - repeated exposure - Category 1The signal word is danger.The hazard statements include:May cause cancer.Causes damage to organs through prolonged or repeated exposurePlease note that this classification was retrieved from the CNESST site on March 3, 2025 and was established by CNESST personnel to the best of their knowledge based on data obtained from scientific literature and it incorporates the criteria contained in the Hazardous Products Regulations (SOR/2015-17). It does not replace the suppliers classification which can be found on its Safety Data Sheet. Back to top Emergency Overview: Colourless crystals. Odourless. Will not burn. VERY TOXIC. Prolonged or repeated exposure causes damage to the lungs. CANCER HAZARD. May cause cancer, if inhaled. Back to top Main Routes of Exposure: Inhalation; skin contact; eye contact.Inhalation: At high concentrations: can irritate the nose and throat.Skin Contact: Not irritating.Eye Contact: May cause slight irritation as a "foreign object". Tearing, blinking and mild temporary pain may occur as particles are rinsed from the eye by tears.Ingestion: Not harmful.Effects of Long-Term (Chronic) Exposure: VERY TOXIC. Can cause lung damage if the dust is breathed in. Symptoms may include shortness of breath, chronic cough and weight loss. There may be a decrease in lung function and the ability to do some physical activities. In severe cases, there can be effects on the heart and death from heart failure.Carcinogenicity: CARCINOGEN. Known to cause: lung cancer.International Agency for Research on Cancer (IARC): Group 1 - Carcinogenic to humans.American Conference for Governmental Industrial Hygienists (ACGIH): A2 - Suspected human carcinogen.Teratogenicity / Embryotoxicity: Not known to harm the unborn child.Reproductive Toxicity: Not known to be a reproductive hazard.Mutagenicity: Conclusions cannot be drawn from the limited studies available. Back to top Inhalation: Take precautions to ensure your own safety before attempting rescue (e.g., wear appropriate protective equipment). Move the victim to fresh air.Skin Contact: Quickly and gently blot or brush away the excess chemical. Wash gently and thoroughly with gently flowing water and non-abrasive soap for 5 minutes.Eye Contact: Quickly and gently blot or brush the chemical off the face. Immediately flush the contaminated eye(s) with gently flowing water for 5 minutes, occasionally lifting the upper and lower eyelids. If irritation or pain persists, get medical attention.Ingestion: Have the victim rinse their mouth with water. Get medical attention if the victim feels unwell.First Aid Comments: If exposed or concerned, see a medical professional for advice. All first aid procedures should be periodically reviewed by a medical professional familiar with the chemical and its conditions of use in the workplace.Note to Physicians: Some jurisdictions specifically regulate an ingredient of this product and require a complete medical surveillance program. Specific information should be sought from the appropriate government agency in your jurisdiction. Back to top Flammable Properties: Does not burn.Suitable Extinguishing Media: Not combustible. Use an extinguishing agent suitable for surrounding fire.Specific Hazards Arising from the Chemical: None known. Not known to generate any hazardous decomposition products in a fire. Back to top Chemical Stability: Normally stable.Conditions to Avoid: Generation of dust.Incompatible Materials: Increased risk of fire and explosion on contact with: oxidizing agents (e.g. peroxides). Not corrosive to metals.Hazardous Decomposition Products: None known.Possibility of Hazardous Reactions: None known. Back to top Personal Precautions: Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Ventilate area.Methods for Containment and Clean-up: Avoid dry sweeping. If necessary, use a dust suppressant such as water. Do not use compressed air for clean-up. Collect using a shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Back to top Handling: Before handling, it is important that all engineering controls are operating and that protective equipment requirements and personal hygiene measures are being followed. Only trained personnel should work with this product. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Avoid generating dusts. Prevent unintentional contact with incompatible chemicals.Storage: Keep the amount in storage to a minimum. Empty containers may contain hazardous residue. Store separately. Keep closed. Store in an area that is: separate from incompatible materials. Back to top ACGIH TLV - TWA: 0.025 mg/m3A2 (respirable)Exposure Guideline Comments: TLV = Threshold Limit Value. TWA = Time-Weighted Average. A2 = Suspected human carcinogen.Adapted from: 2025 TLVs and BEIs - Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. Cincinnati: American Conference of Governmental Industrial Hygienists (ACGIH)NOTE: In many (but not all) Canadian jurisdictions, the exposure limits are similar to the ACGIH TLVs. Since legislation varies by jurisdiction, contact your local jurisdiction for exact details. A list is available in the OSH Answers on Canadian Governmental Occupational Health & Safety Departments.A list of acts and regulations that cover exposure limits to chemical and biological agents is available on our website. Please note that while you can see the list of legislation for free, you will need a subscription to view the actual documentation. Back to top Engineering Controls: Use a local exhaust ventilation and enclosure, if necessary, to control the amount in the air. It may be necessary to use stringent control measures such as process enclosure to prevent product release into the workplace. Back to top Eye/Face Protection: Safety goggles suitable for dust protection.Skin Protection: It is good practice to prevent skin contact.Respiratory Protection:Up to 0.5 mg/m3: (APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter; Any supplied air respirator operated in a continuous-flow mode. Up to 1.25 mg/m3: APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter; Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter.Up to 2.5 mg/m3: (APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode.APF = Assigned Protection FactorRecommendations apply only to National Institute for Occupational Safety and Health (NIOSH) approved respirators. Refer to the NIOSH Pocket Guide to Chemical Hazards for more information. Fact sheet last revised: 2025-03-10 Back to top Classification is defined in Part 1 of the TDG Regulations as: classification means, for dangerous goods, as applicable, the shipping name, the primary class, the compatibility group, the subsidiary class, the UN number, the packing group, and the infectious substance category.Note: This document is a general overview of the TDG classification requirements. For detailed information, please see Part 2 of TDG Regulations. If the dangerous good is an explosive or radioactive material, it must be classified as required by other regulatory authorities.Note: The information below is provided as guidance only. Always check the TDG Act and Regulations to ensure compliance.Please also see the following documents in this series for road transportation of dangerous goods: Back to top The consignor is responsible for determining the classification of dangerous goods. However, if the dangerous goods are explosive, the consignor must use the classification determined by Natural Resources Canada. If the dangerous goods are radioactive, the consignor must use the classification determined by the Canadian Nuclear Safety Commission. If the dangerous goods are biohazardous substances (Class 6.2), the consignor may use the classification determined by Health Canada or the Canadian Food Inspection Agency. Back to top Classification can be done by a consultant or a competent employee who has been trained in TDG classification. Classification is normally done by (or in consultation with):a person capable of understanding the nature of the dangerous good (e.g., manufacturer's professional employees such as a chemical engineer, chemist, scientist, etc.);a person who formulates, blends or otherwise prepares mixtures or solutions of goods (e.g., chemist); orin the case of infectious substances, a doctor, scientist, veterinarian, epidemiologist, genetic engineer, pathologist, nurse, coroner, or laboratory technologist or technician. Back to top If you are the manufacturer of the product, the product must be tested according to Part 2 of TDG Regulations. If the product has already been classified, the consignor may use the TDG classification of the manufacturer or a previous consignor. Although a consignor may also use the classification of the manufacturer or a previous consignor, the consignor is still responsible for making sure the classification is correct, and for making a proof of classification available to the Minister. Back to top A proof of classification is a document that the consignor must provide, upon request, to the federal Minister of Transport. This document may be:a test report,a lab report, ora document that explains how the dangerous goods were classified.The proof of classification must include the following information:the date on which the dangerous goods were classified,if applicable, the technical name of the dangerous goods,the classification of the dangerous goods, andif applicable, the classification method used under Part 2 of the TDG Regulations or under Chapter 2 of the UN Recommendations. Back to top The TDG Directorate keeps alist of laboratoriesthat provide dangerous goods analysis and classification. Note that the TDG Directorate has not examined or certified any of the laboratories. Being on this list does not mean Transport Canada or the TDG Directorate endorses or approves their services. However, it would be prudent to hire a laboratory with appropriate accreditations. Back to top Based on the definition for classification, a competent person must determine the following before a classification can be assigned to a dangerous good:Shipping nameHazard class (the primary class and possible subsidiary class/es)Identification number (the UN number)Packing group, compatibility group, or the infectious substance category for biohazardous substancesand, if applicable,the compatibility group letter;the subsidiary class(es) Back to top Use all three schedules as listed in the TDG Regulations.1. Determine the shipping name: Check if the product name or chemical technical name is listed in Schedule 1 or Schedule 3. If the product's name is listed only in Schedule 3, use the UN number from Column 3 in this schedule to look up the product in Schedule 1. Use the descriptive text written in lowercase letters following a shipping name (see the examples for UN2789 and UN2790 below) to determine the shipping name that most precisely describes the dangerous goods. See the extracted data from Schedule 3 below for Gasoline and Acetic acid solutions.Column 1AColumn 1BColumn 2Column 3Column 4Shipping and or Technical NameAppellation rglementaire et/ou techniqueClass or DivisionUN NumberMarine PollutantGASOLINEESSENCE3UN1203GASOLINEACETIC ACID SOLUTION, not less than 50% but not more than 80% acid, by massACIDE ACTIQUE EN SOLUTION contenant au moins 50 % mais au maximum 80 % (masse) dacide8UN2790ACETIC ACID SOLUTION, more than 80% acid, by massACIDE ACTIQUE EN SOLUTION contenant plus de 80 % (masse) dacide8UN27892. Determine the other classification elements (i.e., class, packing group, etc.)If the product's name is listed in Schedule 1 or you located it by using the listed UN Number in Schedule 3, use the shipping name and its corresponding data (UN number, class, packing group/category) from that row. The data below is an example showing UN1203, GASOLINE. See the extracted data below from Schedule 1 for gasoline, and the acetic acid solutions.Col.1UN NumberCol.2Shipping Name and DescriptionCol.3ClassCol.4Packing Group / CategoryCol.5Special ProvisionsCol.6aExplosive Limit and Limited Quantity IndexCol.6bExcepted QuantitiesCol.7ERAP IndexCol.8Passenger Carrying Vessel IndexCol.9Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle IndexUN1203GASOLINE; MOTOR SPIRIT; orPETROL3II889815030LE2-100L5LUN2789UN1337ACETIC ACID, GLACIAL;orACETIC ACID SOLUTION, more than 80% acid, by massNITROSTARCH, WETTED with not less than 20% water, by mass8(3)4.1III--E2E03 00075Forbidden1L1 kgUN2790ACETIC ACID SOLUTION, not less than 50% but not more than 80% acid, by mass8II-1LE2--1 LFor example, based on the above information from Schedule 1, we have the following data for the classification elements for UN1203:SHIPPING NAME (in Column 2 of Schedule 1): GASOLINE; MOTOR SPIRIT; or PETROL (when selecting the shipping name, you can use one of the three listed names, such as gasoline)The Class (in Column 3 of Schedule 1): 3Identification Number (in Column 1 of Schedule 1): UN1203Packing Group (in Column 4 of Schedule 1): IIColumn 3 in Schedules 1 and column 2 in Schedule 3 will also indicate if a dangerous good is forbidden by all routes of transportation. Schedule 1 also includes information if transportation of a dangerous good is forbidden by a specific route of transportation (e.g., marine vessel/water).Examples of such products are:UN1096 SIGNALS, SMOKE which is not allowed to be transported on a shipCHLORINE DIOXIDE hydrate, frozen or not hydrated are examples of products that are forbidden by all routes of transportation as indicated in

Back to top GHS covers all hazardous chemicals products, such as those used for the following purposes: industrial chemicals consumer chemical products pesticides agricultural chemicals pharmaceuticals The target audiences for GHS include workers in many different industries (e.g., warehouses, construction, chemical manufacturing, transportation), emergency responders, and consumers. Back to top SDS Safety Data Sheet. The GHS SDS has 16 sections in a set order, and minimum information is prescribed.Labels - With the GHS, certain information will appear on the label. Standardized elements such as chemical identify, hazard statements, signal words and symbols will appear on the label according to the classification of that chemical or mixture. Precautionary statements may also be required, if adopted by your regulatory authority. Hazard group While not given a formal definition, GHS divides hazards into three major groups health, physical and environmental.Class Class is the term used to describe the different types of hazards. For example, Gases under Pressure is an example of a class in the physical hazards group.Category Category is the name used to describe the sub-sections of classes. For example, Self-Reactive Chemicals have 7 categories. Each category has rules or criteria to determine what chemicals are assigned to that category. Categories are assigned numbers (or letters) with category 1 (or A) being the most hazardous.Hazard Statement For each category of a class, a standardized statement is used to describe the hazard. For example, the hazard statement for chemicals which meet the criteria for the class Self-heating substances and mixtures, Category 1 is Self-heating; may catch fire. This hazard statement would appear both on the label and on the SDS.Precautionary Statement These statements are standardized phrases that describe the recommended steps to be taken to minimize or prevent adverse effects from exposure to or resulting from improper handling or storage of a hazardous product.Signal word There are two signal words used by the GHS Danger and Warning. These signal words are used to communicate the level of hazard on both the label and the SDS. The appropriate signal word to use is set out by the classification system. For example, the signal word for Self-heating substances and mixtures, Category 1 is Danger while Warning is used for the less serious Category 2. There are categories where no signal word is used.Pictogram Pictogram refers to the GHS symbol on the label and SDS. Not all categories have a pictogram associated with them. Back to top GHS consists of three major hazard groups :Physical hazards.Health hazards.Environmental hazards.Within each of these hazard groups there are classes and categories. Back to top Criteria for classifying chemicals have been developed for the following health hazard classes:Acute toxicity.Skin corrosion/irritation.Serious eye damage/eye irritation.Respiratory or skin sensitization.Germ cell mutagenicity.Carcinogenicity.Reproductive toxicity.Specific target organ toxicity - single exposure.Specific target organ toxicity - repeated exposure.Aspiration hazard. Back to top Criteria for classifying chemicals have been developed for the following physical hazard classes:Explosives.Flammable gases. Aerosols. Oxidizing gases.Gases under pressure.Flammable liquids.Flammable solids.Self-reactive substances and mixtures.Pyrophoric liquids.Pyrophoric solids.Self-heating substances and mixtures.Substances and mixtures which, in contact with water, emit flammable gases.Oxidizing liquids.Oxidizing solids.Organic peroxides.Corrosive to metals. Back to top Criteria for classifying chemicals have been developed for the following environmental hazard classes:Hazardous to the aquatic environment (acute and chronic).Hazardous to the ozone layer. Back to top The GHS criteria are specified in the publication known as theGlobally Harmonized System of Classification and Labelling of Chemicals (GHS) from the United Nations Economic Commission for Europe (UNECE) (this publication is often referred to as the purple book.) The first edition of this book was published in 2003. Since then, the GHS book has been revised every two years as needed and as experience is gained in its implementation. All editions are available in multiple languages and can be accessed for free at the UNECE website. When checking the criteria for a particular hazard class and or a category, make sure that you are viewing the revised edition of the GHS purple book that corresponds to the version that was adopted by your country. Back to top No. The GHS is a 'non-binding' system of hazard communication. However, as mentioned above, there are many benefits when it is voluntarily adopted by countries around the globe. Back to top It is up to the countrys authorities to decide how GHS will be adopted in their legislation. For example, Canada adopted the GHS by revising the existing WHMIS legislation. Back to top No. When a country adopts GHS, the country has freedom to: Select one or more of the hazard classes Select the categories it will adopt for a particular hazard classThe key is that when a GHS hazard class is adopted by a country, the country must adopt that hazard class as specified by GHS. This adoption will help make sure that each country has the same classification criteria as each other. For example, if a country adopts the flammable hazard class and only the Category 1 level, the criteria for Category 1 will be the same for all the countries that adopted this Category. In situations where the country had regulations concerning hazard classes that are not included in GHS, the country is free to include or create legislation to maintain desired levels of protection. Back to top The UNECE publishes information about the status of implementation of GHS by country. Examples include: CanadaCanada adopted GHS in February 2015 by amending the federal Hazardous Product Act (HPA) and the publication of a new regulation titled Hazardous Products Regulations (HPR) under the HPA which is commonly referred to as the federal Workplace Hazardous Materials Information System 2015 (WHMIS 2015) legislation. Provincial and territorial jurisdictions also updated their related legislation. Note that the amendment of the HPA and implementation of the new HPR is based on the fifth revised edition (Rev 5).Amendments are expected from time to time to keep WHMIS in alignment with current GHS recommendations. WHMIS 2015 regulatory updates can be monitored by checking: United States (USA)United States adopted the GHS elements from the 3rd revised edition of the GHS purple book in their Hazardous Communication Standard (HCS) in 2012. This standard is commonly referred to as HCS 2012 and is currently in full force. OSHA is conducting rulemaking to harmonize the HCS to the latest edition of the GHS and to codify a number of enforcement policies that have been issued since the 2012 standard. In their OSHA Trade Release, OSHA announced that they are issuing a proposed rule to update the HCS 2012 with the 7th revised edition of the GHS purple book. Check regulatory updates at: OSHA Trade Release Information and resources for the current US HCS 2012 standard is available at: Hazard communication EuropeInformation about the adoption of GHS in EU and European Economic Areas legislation and revisions is available at:GHS implementation: EU and European Economic Area The EU Classification, Labelling and Packaging (CLP) regulations was updated to align with GHS as of January 20, 2009. Currently CLP with the adopted GHS elements is in full force. The CLP was updated to include changes introduced in the 6th and 7th revised editions of GHS. These changes have been in force as of October 17, 2019.Other Countries Information on the status ofGHS implementationin other countries is available at the UNECE website: GHS implementation: Implementation by country Back to top There is no global organization (e.g., UN, WHO, etc.) that enforces GHS for different countries. Once a country adopts GHS elements (e.g., hazard classes) in its own legislation (e.g., WHMIS), they are enforced by the countrys own authorities. For example, in Canada when a suppliers WHMIS label or SDS are incorrect, Health Canada will enforce the federal WHMIS legislation. Meanwhile, provincial or territorial health and safety authorities enforce their jurisdictions WHMIS legislation. Back to top Information from across Canada is available on the website WHMIS.org.Health Canada also offers an email news service to announce information about WHMIS. Fact sheet last revised: 2021-08-25 Back to top To understand how to prevent fires, it is important to know how a fire can occur. Four elements must be present at the same time for a fire to take place:Fuel or combustible material - something to burn, such as paper or wood.Heat - to raise the material to its ignition (burning) temperature.Oxygen - to sustain combustion (the fire).Chemical reaction - the process of burning.If you remove any of these four elements, the fire will not be able to burn. Back to top Never fight a fire if:You do not know what material is burning.You do not know what type of fire extinguisher to use.You do not know how to use the fire extinguisher.The fire is spreading beyond the spot where it started.Your instincts tell you not to.If you are not confident about your ability to handle the situation (even if you are trained in fire fighting), or if you do not have the correct type of fire extinguisher, do not fight the fire. Pull the fire alarm, evacuate the area, and then call the fire department. Back to top Fires are grouped into classes which depend on the material or substance that is present.Class A - Fires involving ordinary combustibles such as paper, wood, cloth, rubber, or plastics.Class B - Fires involving flammable liquids, gases, oil, paints, or lacquer.Class C - Fires involving energized (live) electrical equipment such as motors, appliances, or power tools.Class D - Fires involving combustible metals such as magnesium, titanium, sodium, and potassium.Class K - Fires involving combustible cooking oils, or fats in cooking appliances. Back to top To fight the different classes of fires, there are different types of fire extinguishers. Each has its own characteristics, capabilities, and limitations.Three main types of portable fire extinguishers include:Water extinguishers: Water extinguishers are filled about two-thirds with water and then pressurized with air. When used for Class A fires, these extinguishers remove the heat from the burning materials.Do not use water to extinguish an electrical fire. Water is a good conductor and can increase the possibility of electrocution.Do not use water to extinguish flammable liquid or cooking oil fires. Water is ineffective as it helps to spread the liquid and the fire.Carbon Dioxide (CO2) extinguishers: The extinguishing media is pressurized CO2. When used for Class B and C fires, the CO2 covers the fuel by blanketing it, and stops the reaction at the surface by displacing oxygen. Be thorough when using a CO2 extinguisher. It has a moderate spray range and last only 10 to 30 seconds. A hard horn attached to the end of the spray tube helps to contain and aim the spray at the target area.Do not use CO2 extinguishers in confined spaces as CO2 can displace the oxygen in the air, making breathing difficult. Only use in a confined space if workers have appropriate respiratory protection.Do not use CO2 extinguishers for Class A fires because the fire may continue to smolder and re-ignite after the CO2 disperses.Dry Chemical extinguishers: Dry chemical extinguishers are the most common and available in few types. These extinguishers will be marked for the classes they are designed to extinguish (e.g., ABC type extinguisher will put out Class A, B and C fires). The extinguishers discharge a blanket of fine powder which creates a break between the fuel and the oxygen in the air. The powder also works to break the chemical reaction. Be accurate when using as they have a short to moderate spray range and last only 10 to 25 seconds.Be cautious of the residue after using dry chemical extinguishers. The residue can damage motors, computers and other electrical equipment.Below is a summary of these and other common extinguishers.Extinguisher Comparison TableExtinguisherClassRangeEmptiesOtherWaterALong60 secFights re-ignitionCO2B and CShort10-20 secMay make breathing difficult in enclosed areasDry ChemicalB and CSome AModerate10-25 secLeaves residueLiquid GasB and CSome AShort10 secMay make breathing difficult in enclosed areasChemical FoamA and BModerate10-30 secLeaves residueBucket of Sand / Dry PowderDCheck with your supervisor regarding equipment for Class D firefightingMedia designed to extinguish combustible metals such as magnesium, sodium, titanium, and potassium.DModerate(quickly)Use a Class D extinguisher that is compatible with the metals presentWet ChemicalKPrevents re-ignition Back to top Portable fire extinguisher may use the following markings to indicate which class of fire they are designed to fight. These symbols are recommended by the National Fire Protection Association (NFPA) in the USA. The symbols may be shown using colours. Back to top Always:Be sure that you are trained to use a fire extinguisher before you try to fight a fire.Know what type and class of material is burning.Use the correct fire extinguisher type to fight the fire.Remember, if you feel that you cannot safely extinguish the fire using the portable extinguisher available and if you have not already done so, pull the fire alarm, evacuate the area, and then call the fire department.When using an extinguisher, use the PASS system - Pull, Aim, Squeeze, Sweep.Pull the pin on the extinguisher.Aim the extinguisher.Squeeze the trigger or top handle.Sweep the fire area with the extinguisher's spray until the fire is completely out.For floor fires, sweep from the edges in. For wall fires, sweep from the bottom up.Never walk away from a fire, even if you think it is out. The residue may reignite.Always stand between the escape route and the fire so you can leave safely if the fire grows.If the fire grows too large, leave the area. Activate the fire alarm to evacuate the area. Back to top As an employer or contractor, you must:Use the proper size of the extinguisher.Install extinguishers according to the height requirements stated in your jurisdiction's Fire Code.Locate extinguishers so they are readily accessible to employees for immediate use.Make sure that extinguishers are clearly visible, and any location signs are clear.Mark or label all fire extinguishers clearly with the class of fire it is to be used for.Make sure that the operating instructions always face outward.Maintain extinguishers in a fully charged and operable condition.Keep extinguishers in the designated places at all times (except during use).Visually inspect portable fire extinguishers monthly.Use a tag on each extinguisher that shows the dates of inspection, recharging or servicing, the name of the servicing agency, and the name of the person who did the service.Service portable fire extinguishers at least once a year, or when the monthly inspection indicates servicing is necessary.Keep written records showing maintenance items such as serial number and type of extinguishers, location, inspection date, description of tests, date of next inspection, date of annual servicing, comments and inspector's signature.Only allow service by trained persons with suitable testing equipment and facilities. Back to top Portable fire extinguishers should be inspected at least monthly. Visually check for the following items. Customize this list for your workplace.Are the fire extinguishers well supported and hangers are fastened solidly?Are the fire extinguishers accessible?Can be easily reachedThere are no obstructionsLocation signs are clearClass markings are clearOperating instructions are clearAre the extinguishers in good working condition?Discharge opening is clearIt is fully chargedIt has not been damaged or tampered withHydrostatic testing has been doneIs the ring pin in place?Is the seal intact? Back to top Extinguishers with the following conditions should be removed from service:When the cylinder or shell threads are damagedWhere there is corrosion that has caused pitting, including corrosion under removable name plate assembliesWhen the extinguisher has been burned in a fireAlways check with the supplier or manufacturer if you are not sure about the serviceability of the fire extinguisher. Back to top Depending on the type of extinguisher, it may be classified as a hazardous product under WHMIS. Many extinguishers will meet the compressed gas criteria and will therefore require a WHMIS label. Other extinguishers may also be classified in other WHMIS classes due to the physical or health effects of the extinguishing media. Fact sheet last revised: 2024-08-23

General structure and classification of bioplastics and biodegradable plastics. Classification of bioplastic. Types of biodegradable plastics. What plastics are biodegradable. List of biodegradable plastics. Classification of plastic waste. Classification of biodegradable polymer. What is biodegradable plastic examples.