

# Fire/Explosives Safety – Know The Laws of Your Province



Understanding the laws governing fire and explosives safety in the workplace is essential for protecting both employees and property in Canada. With industries such as construction, manufacturing, and chemical processing often dealing with flammable materials and explosives, strict regulations are in place to mitigate risks and ensure safe handling practices. Canadian legislation, including the Occupational Health and Safety Act and various provincial regulations, outlines the necessary protocols for storage, usage, and emergency response related to fire and explosive hazards. By comprehensively understanding these laws, employers can create safer work environments, comply with legal obligations, and reduce the potential for accidents.

## ALBERTA

**Employers** in Alberta have specific responsibilities related to fire and explosive safety, as regulated by [Occupational Health and Safety \(OHS\)](#) and the Alberta Fire Code. **Section 470.2(1) to 517.988** pertains to Explosives Safety.

**Storage and disposal of explosives, fuse assemblies, and detonators:**

An **employer and a blaster** must ensure that explosives, fuse assemblies, or detonators that are not used in a blasting

activity:

(a) are stored in accordance with this Code, or

(b) are destroyed or disposed of

(i) in accordance with manufacturer specifications, or

(ii) safely by a blaster if there are no manufacturer's specifications and despite section 12(e). **Section 470.2(1)**

An **employer and a blaster** must ensure that all explosives at a work site are stored in a magazine. **Section 470.2(2)**

An **employer and a blaster** must ensure that any unused explosives are returned to a magazine between periods of work. **Section 470.2(3)**

For Further Information see:

- Access to explosives **Section 470.3**
- Transporting explosives **Section 473(1), 473(2), 473(3)**
- Deteriorated, damaged, or unsafe explosives **Section 475**
- Priming explosives **Section 98**
- Explosives detonated from the surface **Section 517.998**

Further details on the ***Occupational Health And Safety Code*** can be found at [Alberta.ca](http://Alberta.ca).

## **BRITISH COLUMBIA**

General Regulatory Provisions dealing with explosives in B.C.

1. **Training:** A worker engaged in loading, unloading, or conveying explosives must be trained in the proper means for handling the explosives, the hazards of fire and mishandling, and the procedures to follow in the event of a fire or explosion.
2. **Communication:** The **employer** must ensure that the location of a magazine in which explosives are stored,

and any restrictions on access or activity around the magazine area, are clearly communicated to all workers.

3. **Emergency procedures:** Before explosives are transported, the **employer** must establish suitable written emergency procedures and must ensure that all workers who may be affected are adequately instructed in the procedures.
4. **Dangerous incident reports:** If a blasting accident occurs that causes personal injury, or if there is any other dangerous incident involving explosives, whether or not there is personal injury, the **employer** must report the incident.

**Employers** in British Columbia has specific responsibilities concerning fire and explosives safety, regulated primarily by the [BC Occupational Health and Safety Regulation](#). **Section 21.3 to 21.28** pertains to Blasting Operations.

### **Dangerous Incident Reports**

If a blasting accident occurs that causes personal injury, or if there is any other dangerous incident involving explosives, whether or not there is personal injury, the **employer** must:

- (a) report the incident immediately to the Board, and
- (b) forward a written report of the incident to the Board without undue delay.

The written report of the incident must contain:

- (a) the date, time, and location of the incident;
- (b) the names and certificate numbers of all blasters involved;
- (c) the names and occupations of any persons injured;
- (d) the types of explosives, including detonators and initiating device used;

(d.1) the instrument used to test the electric blasting circuit;

(e) a factual account of events including the blaster's log records;

(f) the names of all **employers** responsible for workers present at the worksite when the incident occurred, and

(g) the action taken by each **employer** referred to in paragraph (f). **Section 21.3(1)**

For more information, see:

- Training **Section 21.7.**
- Communication **Section 21.18.**
- Emergency procedures **Section 21.28.**
- Identification **Section 21.7, 21.18, 21.28.**

Further details on regulations under the ***Occupational Health and Safety Regulation*** can be found at [BClaws.gov.bc.ca](http://BClaws.gov.bc.ca).

## **MANITOBA**

In Manitoba, **employer** responsibilities for fire and explosives safety are governed by [The Workplace Safety and Health Regulation](#). **Sections 19.2 to 19.10 and 34.2(1) to 34.16(5)** pertain to Fire And Explosive Hazards.

### **FIRE AND EXPLOSIVE HAZARDS**

An **employer** must:

(a) develop and implement safe work procedures for fire and explosive hazards in the workplace, including hot work if hot work is performed in the workplace;

(b) train workers in safe work procedures; and

(c) ensure that workers comply with the safe work procedures.

## Section 19.2

### Fire Protection Equipment and Fire Extinguishers

An **employer** must ensure that:

- (a) fire protection equipment of an appropriate type and sufficient size and capacity to be effective is installed in the workplace in accordance with the Manitoba Fire Code; and
- (b) portable fire extinguishers are located in the workplace in accordance with the Manitoba Fire Code. **Section 19.3(1)**

An **employer** must ensure that all fire protection equipment and portable fire extinguishers are maintained in accordance with the manufacturer's specifications and the Manitoba Fire Code. **Section 19.3(2)**

For more information, see:

- Flammable or explosive substances in the atmosphere **Section 19.8(1)**
- Explosives Part 34
- SafeWork Procedures, Blasting Operations **Section 34.2(1)**
- Boreholes and Loading Operations **Section 34.16(4)**
- Blasting Operations and Storms **Section 34.16(5)**

Further details on the ***Manitoba Workplace Safety and Health Act and Regulation*** can be found at [gov.MB.ca](http://gov.mb.ca).

## NEW BRUNSWICK

In New Brunswick, **employer** responsibilities regarding fire and explosives safety are governed by the [New Brunswick Occupational Health and Safety \(OHS\) Act](#). **Section 151 to 178** pertains to XII EXPLOSIVES.

### Safety Respecting Explosives – Employer Responsibilities

An **employer shall** ensure that:

- (a) only an authorized supervisor has access to explosives;
- (b) no person carries explosives in flammable clothing;
- (c) no smoking or open flame is permitted
  - (i) within 30 m of any place where an explosive is stored, or
  - (ii) within 15 m of any place where an explosive is being handled, used, or transported, and
- (d) primed explosives are not transported, stored, or handled inside a vehicle or near any electrical equipment. **Section 151**

### **Expired, Surplus, or Damaged Explosives**

An **employer shall** ensure that time-expired, surplus, or damaged explosives are destroyed only by a blaster or other qualified person using methods approved by the supplier. **Section 177(2)**

### **Blasting Mats and Loose Rocks**

An **employer shall** ensure that

- (a) blasting mats are used where there may be a hazard to persons or property from flying debris, and
- (b) loose rocks are scaled off the sides of excavations and removed from the crest after blasting and before any work is resumed. **Section 178**

For more information, see:

- Blaster Role **Section 156**

Further details on the **OCCUPATIONAL HEALTH AND SAFETY ACT** can be found at [Laws.GNB.ca](https://laws.gnb.ca).

## **NEWFOUNDLAND & LABRADOR**

**Employers** in Newfoundland and Labrador have specific responsibilities concerning fire and explosives safety, which are regulated by the [Occupational Health and Safety \(OHS\) Act](#). **Section 420 to 440** pertains to PART XIX GENERAL BLASTING.

### **Security and Report Requirements**

**(1)** Only a person authorized by the **employer shall** have access to the explosives.

**(2)** When explosive materials or initiating systems are brought to the blast site, the **employer** and a blaster **shall**:

**(a)** ensure that the blast site is attended and barricaded;  
and

**(b)** post warning signs stating “Danger”, “Explosives”, or “Keep Out”, or flag the blast site against unauthorized entry.

**(3)** A theft or attempted theft of explosives **shall** be reported by the **employer** to the minister immediately upon becoming aware of the theft.

**(4)** An **employer shall** immediately notify and send written notice within 24 hours to the minister when a blasting accident occurs in which a personal injury is sustained or where there is an unusual occurrence in which explosives are involved, whether or not personal injury is sustained, together with the blaster’s certificate of the blaster involved. **Section 420(1)(2)(3)(4).**

### **Prohibitions**

**(1)** A person **shall** not smoke near an open flame or article liable to spontaneously ignite or likely to cause an explosion or fire. Flammable material and open flames are not permitted within 10 metres of an explosive, magazine, day box, or

blasting area.

(2) Tools or other implements used to open containers of explosives **shall** be made of non-sparking material.

(3) A person **shall** not prime a charge in an area where explosives are stored.

(4) A person **shall** not carry an explosive in their clothing.

#### **Section 426(1)(2)(3)(4)**

For More Information see:

- Manufacturing Explosives **Section 640**
- Cutting or Piercing **Section 641**
- Cartridge explosives **Section 642**

Further details on the ***Guide to OHS Legislation*** can be found at [OHSGuide.WorkplaceNL.ca](https://www.ohsguide.ca/WorkplaceNL).

## **NOVA SCOTIA**

**Employers** in Nova Scotia have specific responsibilities regarding fire and explosives safety under the [Nova Scotia Occupational Health and Safety Act](#). **Sections 5 to 6.2** pertain to the “Explosives Act”.

### **Prohibited Activities**

Except as authorized under this Act and subject to such exemptions as may be provided by regulation, **no person shall:**

(a) make or manufacture any explosive, either wholly or in part, except in a licensed factory;

(b) sell any authorized explosive unless that person is the operator of a licensed factory or licensed magazine and is authorized to sell explosives;

(c) store any explosive in a magazine that is not a licensed

magazine;

**(d)** have in his possession any explosive; or

**(e)** carry on, except in a licensed factory, any of the following processes, namely:

**(i)** dividing an explosive into its components, or otherwise breaking up or unmaking any explosive;

**(ii)** making fit for use any damaged explosive, or

**(iii)** remaking, altering, or repairing any explosive.

## **Section 5**

### **Manufacture of Unmarked Plastic Explosives**

**(1)** No person **shall** manufacture unmarked plastic explosives unless the explosives are:

**(a)** manufactured in limited quantities solely for use in such of the following activities as are authorized, in writing, by the Chief Inspector of Explosives, namely:

**(i)** research, development, or testing of new or modified explosives;

**(ii)** training in explosives detection, or in the development or testing of explosives detection equipment, or

**(iii)** forensic science activities; or

**(b)** destined to be incorporated as an integral part of a military device in Canada within three years after the "coming into force" of this section.

**(2)** No person **shall** transport or possess unmarked plastic explosives unless the explosives are:

**(a)** transported or possessed in limited quantities solely

for use as authorized in the manner referred to in paragraph (1)(a); or

**(b)** destined to be and are incorporated as an integral part of a military device in Canada within three years after the “coming into force” of this section. **Section 6.1**

For more information, see:

- Regulations Governor in Council **Section 5**

Further details and regulations on **The Explosives Act** can be found at [Laws-lois.justic.gc.ca](https://laws-lois.justic.gc.ca).

## **ONTARIO**

**Employers** In Ontario are required to follow the Ontario Occupational Health and Safety Act (OHSA) for fire and explosives safety. **Sections 121 to 129 of Regulation 854** set out the relevant requirements regarding the storage and security of explosives. Additional requirements for explosives are set out in **sections 131 to 154 of the regulation**.

Explosives are used extensively in Ontario mines and can pose a hazard if not stored, secured, and used in a proper manner. Properly stored blasting explosives, detonating cords, and initiation systems will help ensure the safety and security of workers, as well as the workplace itself.

Explosives can generally be considered as any substance that is made, manufactured, or used to produce an explosion or detonation and includes:

- Gunpowder
- Detonating cords
- Water gel
- Blasting agents
- Propellant powder

- Detonators
- Dynamite
- Slurry

## **Explosives suitable for use underground**

**Subsection 121** (a) of Regulation 854 requires that an owner of an underground mine must ensure that explosives are suitable for use underground. No explosive may be used in an underground mine unless the Explosives Regulatory Division of the Department of Natural Resources Canada has determined it is suitable for use underground.

To ensure the worker's health and safety is protected, **employers** must adequately ventilate the workplace of post blast contaminants by means of mechanical ventilation systems in accordance with **Section 252 of Regulation 854** before workers are permitted to enter the workplace.

**Section 126 of Regulation 854** requires that explosive magazines, temporary explosive storage containers, and temporary explosive storage areas in an underground mine must be conspicuously marked by a "DANGER EXPLOSIVES" sign and located at least 60 metres from:

- The main access into or from a mine;
- Key mechanical and electrical installations that remain in service during a mine emergency;
- Areas of refuge or other areas where workers may congregate, and
- Storage areas for fuels or other potential sources of fire.

**Section 128** requires the **employer** to establish, in consultation with the Joint Health and Safety Committee or a health and safety representative, a procedure for safely disposing of damaged explosives.

**Section 129** requires that all wiring and electrical equipment

installed or used in an explosive storage area or a magazine complies with:

- The requirements of the Ontario Electrical Code with respect to Zone 22 locations.
- The National Standard of Canada CAN/BNQ 2910-500 Explosives Magazines for Industrial Explosives.
- Requirements that ensure protection against lightning strikes and electrical surges.

**Section 134** requires explosives to be delivered without delay from near the shaft collar, entrances to underground workings and or shaft stations, and transported from a magazine to other magazines or place of use without delay and by the most direct and safe route.

Further details on the **Occupational Health and Safety Act** can be found at [Ontario.ca](https://www.ontario.ca).

## **PRINCE EDWARD ISLAND**

In Prince Edward Island (PEI), **employers** must adhere to the [Occupational Health and Safety \(OHS\) Act](#) regarding fire and explosives safety. **Section 26 to 26.60** pertains to Explosives.

### **EXPLOSIVES – PART 26**

#### **Obligations of Employer**

Unless otherwise specified, the **employer shall** ensure compliance with the regulations in this Part and compliance with **sections 77 and 78** of the Criminal Code of Canada relating to the legal duties of persons in possession or control of explosive substances. **Section 26.1**

#### **Safe Work Procedures**

Where work is being carried out and explosives are to be used:

**(a)** A competent person **shall** be appointed to be in charge of

and personally present at all blasting operations, and that person **shall** enforce their orders and directions and **shall** supervise the fixing of all charges and other blasting operations;

**(b)** The names of all persons designated to handle, transport, prepare, or use dynamite or other high explosives **shall** be posted in the field office and on or in the magazines;

**(c)** No person inexperienced in handling dynamite or other high explosives **shall** handle, transport, prepare, or use dynamite or other high explosives unless the inexperienced person works under the personal supervision of a competent person;

**(d)** No holes **shall** be drilled within 3.5 metres (10 ft.) of a hole containing explosives or blasting agents, or within 7.6 metres (25 ft.) of a hole being loaded with explosives or blasting agents;

**(e)** Blasting mats **shall** be used where necessary to protect persons, structures and other property on or adjacent to the workplace from flying rocks and other objects due to blasting operations. **Section 26.2**

## **Conveyance**

Explosives in excess of 22.7 kg (50 lbs.) **shall not** be conveyed in any vehicle which is carrying, as merchandise, any articles liable to cause or communicate fire or explosion. **Section 26.5**

## **Unauthorized persons**

Unauthorized persons **shall not** have access to explosives. **Section 26.9**

Further details on the **Occupational Health and Safety Act General Regulations** can be found at [PrinceEdwardIsland.ca](http://PrinceEdwardIsland.ca).

## QUÉBEC

**Employers** in Québec have specific obligations regarding fire and explosives safety under the [Act Respecting Explosives](#). **Sections 2 to 24** pertain to Explosives.

### **ACT RESPECTING EXPLOSIVES (Sections 2 to 20)**

2. No person **shall** have explosives in their possession unless they hold a permit for such purpose.

3. It is prohibited to deliver explosives to, or procure explosives for, any person who does not hold a permit authorizing them to have explosives in their possession.

4. No person **shall** have in their possession a greater quantity of explosives than that authorized by their permit.

5. It is prohibited to deliver to or procure for any person a greater quantity of explosives than that authorized by their permit.

6. Every person who delivers explosives to or procures explosives for the holder of a permit must indicate on such permit their name and address, the quantity of explosives delivered, and the date of the delivery.

7. Every person who has explosives in their possession upon the expiry of their permit must forthwith destroy such explosives in accordance with the regulations or deposit them with their supplier; if the latter no longer holds a permit, such person must then deposit them with any other vendor of explosives who holds a permit.

8. Every person who has explosives in their possession must, when not using them, keep them in a building or a container which complies with the regulations, or deposit them with his supplier; if the latter no longer holds a permit, such person must then deposit them with any other vendor of explosives who holds a permit.

9. Every vendor with whom explosives are deposited in accordance with **section 7 or 8** must accept the deposit thereof upon the conditions determined by regulation.

10. Every person who has explosives in their possession must forthwith notify an inspector of explosives, appointed under **section 17**, of every theft, loss, or disappearance of such explosives.

11. Every inspector of explosives may, in the performance of their duties, at any time enter any place where they have reason to believe that there are explosives and inspect it; they may also require any person who has explosives in their possession to show them their permit and provide them with any information respecting the carrying out of this Act and the regulations.

12. An inspector of explosives may seize the explosives in respect of which they have reasonable cause to believe that the standards applicable to them under this Act or the regulations are not complied with.

20. It is prohibited to hinder a member of the Sûreté du Québec authorized under **section 11** or an inspector of explosives in any way in the performance of the duties assigned to them by this Act, to mislead them by concealment or false declarations or to refuse to provide them with any information which they are entitled to obtain under this Act.

This Act **shall** not apply to explosives under the control of the Minister of National Defense of Canada, as long as they are under his control.

Further details on the **Act Respecting Explosives** can be found at [Legisquebec.gouv.qc.ca](http://Legisquebec.gouv.qc.ca).

## **SASKATCHEWAN**

**Employers** in Saskatchewan must comply with the [Saskatchewan](#)

[Occupational Health and Safety Regulations](#) for fire and explosives safety. **Sections 26 to 26-5** pertain to Explosives.

## **Explosives Part 26 – Application**

This Part applies to all blasting activities except blasting activities governed by The Mines Regulations. **Section 26-1**

### **Qualifications of Workers**

An **employer** or contractor who plans to conduct blasting activities **shall** ensure that a worker who is to undertake a blasting operation:

**(a)** has been thoroughly trained in:

**(i)** the estimation of the amount of explosives required, and in placing, priming and initiating the charge;

**(ii)** the appropriate procedures to be followed to ensure the safety of other workers;

**(iii)** the procedures to be followed in the event of a misfire; and

**(iv)** the examination of the site after blasting to ensure that it is safe to return to the site;

**(b)** has demonstrated competence to carry out the procedures mentioned in clause (a);

**(c)** has a thorough knowledge of all federal and provincial statutes, regulations, and codes of practice pertaining to the safe use of explosives that are relevant to the blasting operation in question; and

**(d)** holds a written authorization to blast signed by the worker's **employer**.

**(2)** A worker **shall** not undertake a blasting activity until the worker possesses written authorization to blast signed by the

worker's **employer. Section 26-2(1)**

For More Information see:

- Written procedures **Section 26-3**
- Equipment **Section 26-4**
- Storage and Transportation of Explosives **Section 26-5**

Further details on the **Occupational Health and Safety Regulations** can be found at [Saskatchewan.ca](http://Saskatchewan.ca)

## **NORTHWEST TERRITORIES & NUNAVUT**

**Employers** in the Northwest Territories and Nunavut must adhere to fire and explosives safety regulations under the [Explosives Use Act](#). **Sections 1 to 23** pertain to EXPLOSIVES REGULATIONS:

### **Responsibilities And Role of Permit Holder**

2. Subject to **section 4**, no person **shall** explode or cause to be exploded any explosives in the Northwest Territories unless he or she is the **holder of a permit issued** under this Act.

3. Subject to **section 4**, no person, other than the **holder of a permit** or a person under the supervision and control of a **holder of a permit, shall** handle or place an explosive for the purpose of arranging, preparing, or causing an explosion.

4. **Sections 2 and 3** do not apply to explosives that are exploded, handled, or placed in accordance with the regulations made under the Mine Health and Safety Act.

6. A **permit holder** and any other person responsible for the care or use of explosives **shall** ensure that the apparatus used in the process of exploding explosives is within regulation and safe to use.

9. (2) A **permit holder shall** supervise the destruction of any explosive that appears to have deteriorated and **shall** ensure that the explosive is destroyed by a safe method.

13. Before detonating an explosive, a **permit holder shall** (a) sound an audible warning at a reasonable time before the detonation; (b) ensure that all avenues of approach to the site are guarded; (c) ensure that all workers and other persons near the site of the explosion have reached a place of safety; and (d) shout “fire” immediately before detonating the explosive.

15. (1) Where an explosive has been primed and placed in position for detonation, the **permit holder shall** ensure that (a) no person removes the explosive from its position; and (b) the explosive is detonated.

22. (1) After an explosive is detonated, the **permit holder shall** immediately make an inspection of the site of the explosion and **shall** not permit any person to (a) return to the site until the inspection is complete; and (b) drill at the site until the permit holder has ensured that no explosive remains unexploded.

(2) After an explosive is detonated, no person other than the **permit holder shall** leave his or her place of refuge and return to the site of the explosion until permitted to do so by the permit holder in accordance with subsection (1).

23. **The permit holder shall** detonate an explosive that has misfired as soon as possible after the misfiring.

More information and further details on other sections under the **Explosives Use Act** can be found at [Justice.gov.NT.ca](http://Justice.gov.NT.ca)

## **YUKON**

**Employers** in Yukon must adhere to fire and explosives safety regulations under the [Workers’ Safety and Compensation Board Yukon](#). **Section 14.02 to 14.43** which pertains to Part 14 – Blasting.

Any person who handles, transports, or stores explosives **shall**

be familiar with and comply with applicable provisions of the *Explosives Act* (Canada) and any Regulations made thereunder, and the *Transportation of Dangerous Goods Act* (Canada) and Regulations. **Section 14.02**

### **Blaster's Assistants**

A worker who assists a blaster to prepare, fix, or fire charges and handle misfires **shall**:

- (a) Be a qualified person, instructed in the safe handling of explosives;
- (b) Remain under the full and direct control of the blaster, and
- (c) Be continuously visually monitored by the blaster who is responsible for the assistant's work. **Section 14.09**

### **TRANSPORTATION OF EXPLOSIVES – Vehicles with passengers**

(1) No more than 75 kg (165 lbs.) of explosives **shall** be carried in a vehicle primarily designed for the carriage of passengers and their baggage.

(2) Explosives carried in a vehicle **shall** be in a fully enclosed, locked, fire resistant, fixed container, or compartment, separate from the passenger compartment. **Section 14.13**

### **Separate containers**

(1) No explosive material **shall** be transported in a conveyance unless:

(a) The detonators are kept in a separate container and separated from other explosives by a partition in accordance with the requirements of the *Explosives Act* (Canada) and its Regulations, or a separation between the containers of a minimum of 0.6 m (2 ft.), and

**(b)** The explosive materials are protected from contact with iron or steel surfaces with wood, a tarpaulin, or other suitable materials. **Section 14.14**

For more information, see:

- Storage of Explosives **Section 14.24**
- Explosives delivered **Section 14.25**
- Storage Beyond Normal Hours **Section 14.26**
- Day Box Markings **Section 14.29**
- Underground Storage of Explosives – Application for Magazine **Section 14.30**
- Handling Explosives (Blaster) **Section 14.39**
- Safety Fuse Use **Section 14.40**
- Igniters **Section 14.42**
- Damaged or Deteriorated Explosives **Section 14.43**

Further details on the **Workers' Safety and Compensation Board Yukon** can be found at [wcb.YK.ca](http://wcb.YK.ca).