

**Participants' Guide**  
**for**  
**Transportation of**  
**Dangerous Goods**  
**Regulations**  
**General Awareness**  
**Course**

Fall, 2024



6 Mountain Ash Court  
Dartmouth, Nova Scotia B2Y4J8  
<https://www.newwaveohs.com/>  
[newwaveohs2016@gmail.com](mailto:newwaveohs2016@gmail.com)

## Table of Contents

Definitions .....	5
Exercise - Definitions .....	6
Exemptions .....	7
Exemptions under the Transportation of Dangerous Goods Regulations .....	7
Part 1: Special Cases.....	7
150 kg Gross Mass Exemption .....	8
500 kg Gross Mass Exemption .....	9
Limited Quantities Exemption .....	10
Excepted Quantities Exemption.....	11
Exercise - Exemptions.....	12
Classification and Packing Groups.....	14
List of Classes and Divisions .....	14
Classification and Packing Group Summary .....	15
Class 1, Explosives.....	15
Class 2, Gases (Boiling point below 20°C) .....	15
Class 2.1, Flammable Gases.....	15
Class 2.2, Non-flammable and Non-toxic Gases .....	15
Class 2.3, Toxic Gases.....	15
Aerosols .....	15
Exemption .....	15
Class 3, Flammable Liquids .....	15
Packing Groups.....	16
Class 4, Flammable Solids; Substances Liable to Spontaneous Combustion; Substances That on Contact with Water Emit Flammable Gases (Water-reactive Substances) .....	16
Class 4.1, Flammable Solids .....	16
Class 4.2, Substances Liable to Spontaneous Combustion.....	16
Class 4.3, Water-reactive Substances.....	16
Packing Groups – Division 4.1.....	16
Packing Groups – Division 4.2.....	17
Packing Groups – Division 4.3.....	17
Class 5, Oxidizing Substances and Organic Peroxides .....	17
Class 5.1 .....	17
Class 5.2, Organic Peroxides .....	17
Packing Groups.....	18

Class 6, Toxic and Infectious Substances .....	18
Class 6.1, Toxic Substances .....	18
Class 6.2, Infectious Substances.....	18
Packing Groups.....	19
Class 7, Radioactive Materials .....	19
Class 8, Corrosives.....	19
Packing Groups.....	20
Class 9, Miscellaneous Products, Substances or Organisms.....	20
Exercise - Classification .....	22
Table of Precedence .....	23
Exercise – Precedence.....	24
Documentation.....	25
Exercise: Shipping Document.....	27
Safety Marks .....	28
Common Safety Marks .....	28
Special Safety Marks.....	29
Exercise: Safety Labels .....	30
Exercise: Safety Labels and Placards.....	32
Means of Containment.....	34
UN Safety Certification Marks.....	34
Allowable Means of Containment for Class 2, Gases .....	35
Small Means of containment for Classes 3, 4, 5, 6.1, 8 and 9 .....	35
Large Means of containment for Classes 3, 4, 5, 6.1, 8 and 9 .....	36
Exercise: Means of Containment.....	37
Emergency Response Assistance Plans.....	38
When is an ERAP Required? .....	38
ERAP Contents .....	39
ERAP Reporting .....	39
Exercise: Emergency Response Assistance Plans.....	40
Reporting .....	41
Release or Anticipated Release Report.....	41
Loss or Theft Report – All modes .....	43
Unlawful Interference Report – all modes .....	43
Site Registration.....	44
Who must register? .....	44

Registration Details .....	44
Renewals and Updates .....	45
Client Identification Database (CID) Links .....	45
Notes .....	45

## Definitions

### Carrier

- means a person who has possession of dangerous goods while they are in transport
- Does not matter if they are being paid

### Consignor

- means a person in Canada who
  - is named in a shipping document as the consignor;
  - imports or who will import dangerous goods into Canada;
  - If neither above apply, has possession of dangerous goods immediately before they are in transport
- You may be both a consignor and a carrier of the same consignment
  - Manufacturer who also transports the dangerous goods they produce

### Consignment

- quantity of dangerous goods transported at the same time in one or more means of containment from one consignor at one location to one consignee at another location

### Handling

- Loading, unloading, packing or unpacking dangerous goods in a means of containment for the purposes of, in the course of or following transportation
- Includes storing them in the course of transportation

### In transport

- A person has possession of dangerous goods for the purposes of transportation or for the purposes of storing them in the course of transportation

### Offer for transport (for dangerous goods not in transport)

- To select or allow the selection of a carrier
- To prepare or allow the preparation of the dangerous goods so that a carrier can take them
- To allow a carrier to take possession for transport

### Means of transport

- Road or railway vehicle, aircraft, vessel, pipeline or any other contrivance that is or may be used to transport persons or goods

### Means of containment

- Container or packaging, or any part of a means of transport that is or may be used to contain goods

### Large means of containment

- Capacity greater than 450 L

Small means of containment

- Capacity less than or equal to 450 L

Minimum required means of containment

- A means of containment is the minimum required means of containment if
  - all other means of containment containing it are removed, the means of containment and the dangerous goods would comply with the law
  - all other means of containment containing it and the means of containment itself are removed, some of the dangerous goods it contains would no longer comply
- A railway boxcar containing a cylinder propane
  - would not be the minimum required means of containment for that propane because, if the boxcar were removed, the propane would still be in a legal means of containment (i.e. the cylinder)
- When the words “means of containment” are used, they refer to the minimum required means of containment unless specified
- The identification of the minimum required means of containment is essential in determining gross mass (MOC + dangerous goods)
- Can clarify when safety marks do not need to be displayed on means of containment inside the minimum required means of containment

Exercise - Definitions

A company ships chlorine from a central warehouse to a remote water treatment station.

- Are the shipments “consignments” if they go from one company location to another company location?
- If so, is the company a consignor? Consignee?

---

---

---

---

---

---

## Exemptions

### Exemptions under the Transportation of Dangerous Goods Regulations Part 1: Special Cases

- 1.15 - 150 kg Gross Mass Exemption
- 1.16 - 500 kg Gross Mass Exemption
- 1.17 - Limited Quantities Exemption
- 1.17.1 - Excepted Quantities Exemption
- 1.18 - Medical Device or Article
- 1.19 - Samples for Inspection or Investigation Exemption
- 1.19.1 - Samples Classifying, Analysing or Testing Exemption
- 1.19.2 - Samples Demonstration Exemption
- 1.20 - National Defence
- 1.21 - Agriculture: 1 500 kg Gross Mass Farm Vehicle Exemption
- 1.22 - Agriculture: 3 000 kg Gross Mass Farm Retail Exemption
- 1.23 - Agriculture: Pesticide Exemption
- 1.24 - Agriculture: Anhydrous Ammonia Exemption
- 1.25 - Transportation within a Facility
- 1.26 - Emergency Response Exemption
- 1.27 - Operation of a Means of Transport or a Means of Containment Exemption
- 1.28 - Transportation between Two Properties
- 1.30 - Ferry Exemption
- 1.30.1 - Propane and Gasoline in Highway Tanks on Board Passenger Carrying Vessels
- 1.31 - Class 1, Explosives, Exemption
- 1.32 - Class 2, Gases, or Ammonia Solutions (Class 8) in Refrigerating Machines Exemption
- 1.32.1 - Class 2, Gases, that May Be Identified as UN1075, LIQUEFIED PETROLEUM GAS
- 1.32.2 - Class 2, Gases, Absolute Pressure between 101.3 kPa and 280 kPa
- 1.32.3 - Class 2, Gases, in Small Means of Containment Exemption
- 1.33 - Class 3, Flammable Liquids: General Exemption
- 1.34 - Class 3, Flammable Liquids, Flash Point Greater Than 60°C but Less Than or Equal to 93°C
- 1.35 - UN1202, DIESEL FUEL, or UN1203, GASOLINE, Exemption
- 1.36 - Class 3, Flammable Liquids, Alcoholic Beverage and Aqueous Solution of Alcohol Exemption
- 1.38 - Polyester Resin Kit Exception
- 1.39 - Class 6.2, Infectious Substances, UN3373, BIOLOGICAL SUBSTANCE, CATEGORY B Exemption
- 1.41 - Biological Products Exemption
- 1.42 - Human or Animal Specimens Believed Not to Contain Infectious Substances Exemption
- 1.42.1 - Tissues or Organs for Transplant Exemption
- 1.42.2 - Blood or Blood Components Exemption
- 1.42.3 - Medical or Clinical Waste
- 1.43 - Class 7, Radioactive Materials, Exemption
- 1.44 - Residue of Dangerous Goods in a Drum Exemption
- 1.45 - Fumigation of Means of Containment
- 1.45.1 - Marine Pollutants Exemption

- 1.46 - [Miscellaneous Special Cases](#)
- 1.47 - [UN1044, FIRE EXTINGUISHERS, Exemption](#)
- 1.48 - [Air Ambulance Exemption](#)
- 1.49 - [Cylinder Exemption](#)
- 1.50 - [Hot Air Balloon Cylinder Exemption](#)

## 150 kg Gross Mass Exemption

Exempt from what:

- Documentation (shipping document), Safety Marks, Means of Containment, Training, Reporting

Conditions

- Class 2, Gases, they are in one or more small means of containment in compliance with the requirements for transporting gases
- Other than Class 2, Gases, they are in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety
- All individual means of containment have a gross mass less than or equal to 30 kg;
  - except for Class 2, Gases
- gross mass of all dangerous good is less than or equal to 150 kg
- dangerous goods are in a quantity or concentration available to the general public and are transported by a
  - user or purchaser of the dangerous goods, or
  - retailer to or from a user or purchaser of the dangerous goods

Limitations

- Not available for air transport
- Do not require an emergency response assistance plan
- Do not require a control or emergency temperature
- Are not any of 33 listed types of fireworks, explosives, ammunition, flares
- Are not flammable gases, in a cylinder over 46 L
- Are not toxic gases
- Are not any of Class 4, Flammable Solids or water-reactive substances and in Packing Group I
- Are not organic peroxides, unless they are allowed to be transported as limited quantities
- Are not liquids included in Class 6.1, Toxic Substances, and Packing Group I
- Are not infectious substances
- Are not radioactive materials that are required to be licensed



## 500 kg Gross Mass Exemption

Exempt from what:

- Documentation (shipping document), Safety Marks, Means of Containment

Conditions

- Class 2, Gases,
- dangerous goods not included in Class 2, Gases but
  - are in one or more means of containment each of which has a gross mass less than or equal to 30 kg and that is designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety, or
  - are in drums in compliance with the regulations
- the gross mass of all dangerous goods
  - transported by road or rail is less than or equal to 500 kg, and
  - transported by ship is less than or equal to 500 kg, excluding the dangerous goods in a vehicle or railcar being transported on the vessel
- each means of containment has displayed on one side, other than a side on which it is intended to rest or to be stacked during transport,
  - the safety marks required by the regulations, or
  - for dangerous goods, other than dangerous goods included in Class 2, Gases, the shipping name of the dangerous goods and the marks required for them in one of the following laws:
    - “Pest Control Products Act” and its regulations, or
    - “Hazardous Products Act” and its regulations;
- dangerous goods are accompanied by a shipping document and a document which includes the following information in the following order:
  - primary class of the dangerous goods, following the word “Class” or “Classe”, and
  - total number of means of containment, on which a dangerous goods safety mark is required to be displayed, for each primary class, following the words “number of means of containment” or “nombre de contenants”.
  - For example,
    - Class 3, number of means of containment, 10
    - Class 8, number of means of containment, 12

Limitations

- Do not require an emergency response assistance plan
- Do not require a control or emergency temperature
- Are not any of 9 listed types of fireworks, explosives, ammunition, flares
- Are not flammable gases, in a cylinder over 46 L
- Are not toxic gases
- Are not any of Class 4, Flammable Solids or water-reactive substances and in Packing Group I

- Are not organic peroxides, unless they are allowed to be transported as limited quantities
- Are not liquids included in Class 6.1, Toxic Substances, and Packing Group I
- Are not infectious substances
- Are radioactive materials that are required to be licensed

## Limited Quantities Exemption

A quantity of dangerous goods, other than explosives, is a limited quantity if

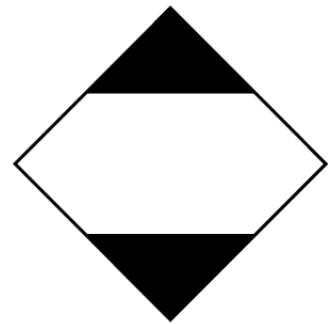
- the dangerous goods are in one or more means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety; and
- each outer means of containment has a gross mass that is less than or equal to 30 kg and the dangerous goods in the inner means of containment have a mass or volume that is less than or equal to the number shown in column 6(a) of Schedule 1

Exempt from what:

- Documentation (shipping document), Safety Marks, Means of Containment, Training, Emergency Response Assistance Plan and (Reporting Requirements)

Conditions

- each means of containment is legibly and durably marked on one side, other than a side on which it is intended to rest or to be stacked during transport, with the Limited Quantities Exemption Mark
- Inner means of containment is not required to be marked if
  - the gross mass of the outer means of containment is less than or equal to 30 kg;
  - the outer means of containment is not intended to be opened during transport; and
  - the outer means of containment has a Limited Quantities Exemption Mark
- When inside an overpack, the Limited Quantities Exemption Mark must be displayed on the overpack unless the marks on the small means of containment are visible through the overpack



## Excepted Quantities Exemption

A quantity of dangerous goods, other than explosives, is an excepted quantity if

- the dangerous goods are in an inner means of containment and an outer means of containment that are designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety;
- any of the dangerous goods in the inner means of containment have a mass or volume that is less than or equal to the number shown in column 1 of the below table for the corresponding code in column 6(b) of Schedule 1 and
- any of the dangerous goods in the outer means of containment have a mass or volume that is less than or equal to the number shown in column 2 of the below table for the corresponding code in column 6(b) of Schedule 1.
- When dangerous goods in excepted quantities for which different alphanumeric codes are assigned are together in an outer means of containment, the total quantity of dangerous goods must not exceed the lowest maximum net quantity per outer means of containment that is set out in column 2 of the table to this subsection for any of the dangerous goods.

### Excepted Quantities

Alphanumeric Code	Column 1 Maximum net quantity per inner means of containment (in g for solids and mL for liquids and gases)	Column 2 Maximum net quantity per outer means of containment (in g for solids and mL for liquids and gases, or sum of g and mL in the case of mixed packing)
E0	Not permitted as Excepted Quantity	
E1	30	1000
E2		500
E3		300
E4	1	500
E5	1	300

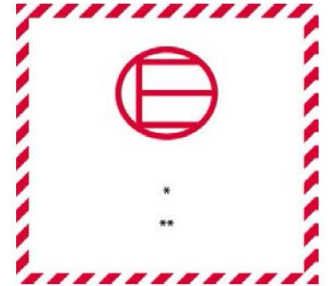
Exempt from what:

- Documentation (shipping document), Safety Marks, Means of Containment, Training, Emergency Response Assistance Plan and Reporting Requirements
- Everything except Classification and General Section if assigned to codes E1, E2, E4 and E5 in column 6(b) of Schedule 1 if
  - The net quantity of the dangerous goods per inner means of containment is less than or equal to 1 g for solids or 1 mL for liquids and gases; and

- (b) the net quantity of the dangerous goods per outer means of containment is less than or equal to 100 g for solids or 100 mL for liquids and gas

Conditions

- each means of containment is marked on one side, other than a side on which it is intended to rest or to be stacked during transport, with the excepted quantities mark
- if an inner means of containment is inside an outer means of containment, the inner means of containment is not required to be marked if
  - outer means of containment is not intended to be opened during transport; and
  - outer means of containment is marked, legibly and visibly on a contrasting background, with the mark illustrated in that subsection
- When in a means of containment that is inside an overpack, the excepted quantities mark must be displayed on the overpack, unless that information is on the means of containment and is visible through the overpack
- Shipping document must include the words “dangerous goods in excepted quantities” or “marchandises dangereuses en quantités exceptées” and must indicate the number of outer means of containment



Limitations

- The number of outer means of containment containing dangerous goods in excepted quantities on a road vehicle, a railway vehicle or an intermodal container must not exceed 1 000

Exercise - Exemptions

I have 7 old transformers containing 25 kg of PCBs each. Which exemptions can I use?

---



---



---



---



---



---

I want to ship 10 full propane cylinders (barbecue-size). Can I use any exemptions? If so:

- Which ones?
- What else do I need to do (if anything)?



## Classification and Packing Groups

### List of Classes and Divisions

#### CLASS 1 – EXPLOSIVES

- Division 1.1: Substances and articles which have a mass explosion hazard
- Division 1.2: Substances and articles which have a projection hazard but not a mass explosion hazard
- Division 1.3: Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both
- Division 1.4: Substances and articles which present no significant hazard; only a small hazard in the event of ignition or initiation during transport with any effects largely confined to the package
- Division 1.5: Very insensitive substances which have a mass explosion hazard
- Division 1.6: Extremely insensitive articles which do not have a mass explosion hazard

#### CLASS 2 – GASES

- Division 2.1: Flammable gases
- Division 2.2: Non-flammable, non-toxic gases
- Division 2.3: Toxic gases

#### CLASS 3 – FLAMMABLE LIQUIDS

- There are no subdivisions within Class 3, Flammable Liquids

#### CLASS 4 – FLAMMABLE SOLIDS; SUBSTANCES LIABLE TO SPONTANEOUS COMBUSTION; SUBSTANCES WHICH EMIT FLAMMABLE GASES WHEN IN CONTACT WITH WATER

- Division 4.1: Flammable solids
- Division 4.2: Substances liable to spontaneous combustion
- Division 4.3: Substances which, in contact with water, emit flammable gases

#### CLASS 5 – OXIDIZING SUBSTANCES; ORGANIC PEROXIDES

- Division 5.1: Oxidizing substances
- Division 5.2: Organic peroxides

#### CLASS 6 – TOXIC SUBSTANCES; INFECTIOUS SUBSTANCES

- Division 6.1: Toxic substances
- Division 6.2: Infectious substances

#### CLASS 7 – RADIOACTIVE MATERIAL

- There are no subdivisions within Class 7, Radioactive Material

#### CLASS 8 – CORROSIVES

- There are no subdivisions within Class 8, Corrosives

#### CLASS 9 – MISCELLANEOUS DANGEROUS GOODS

- There are no subdivisions within Class 9, Miscellaneous Dangerous Goods

## Classification and Packing Group Summary

### Class 1, Explosives

- capable, by chemical reaction, of producing gas at a temperature, pressure and speed that would damage the surroundings; or
- designed to produce an explosive or pyrotechnic effect as a result of non-detonative, self-sustaining exothermic chemical reactions

The classification is determined in accordance with the “Explosives Act”

### Class 2, Gases (Boiling point below 20°C)

#### Class 2.1, Flammable Gases

- Have a lower flammability/explosive limit of 13 per cent or less, or
- Have a flammability/explosive range of at least 12 percentage points

#### Class 2.2, Non-flammable and Non-toxic Gases

- Transported at an absolute pressure greater than or equal to 280 kPa at 20°C, or as refrigerated liquids, and that are not included in Class 2.1 or Class 2.3

#### Class 2.3, Toxic Gases

- are known to be toxic or corrosive to humans according to standard tests, or
- have an LC<sub>50</sub> value less than or equal to 5 000 mL/m<sup>3</sup>.

There are no packing groups for Class 2, Gases.

#### Aerosols

Dangerous goods contained in an aerosol container must be transported under UN1950, AEROSOLS.

Precise classification should be done by knowledgeable staff.

#### Exemption

These Regulations do not apply to gases included in Class 2.2, Non-flammable and Non-toxic Gases that are contained

- in foodstuffs, including carbonated beverages other than UN1950 (aerosols containing compressed oxygen);
- in balls intended for use in sports;
- in tires; or
- in light bulbs.

The above exemption applies only if the light bulbs are packaged so that any pieces of a ruptured bulb are contained by the packaging.

### Class 3, Flammable Liquids

- have a flash point less than or equal to 60°C using the closed-cup test method or a flash point of 65.6°C, using the open-cup test method, or

- are intended or expected to be at a temperature greater than or equal to their flash point at any time while in transport
  - The UN number and shipping name for these DG referred are UN3256, ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S.

Despite the above, liquids that have a flash point greater than 35°C are not included in Class 3, Flammable Liquids, if they

- do not sustain combustion,
- have a fire point greater than 100°C, or
- are water-miscible solutions with a water content greater than 90 per cent by mass.

#### Packing Groups

- Packing Group I, if they have an initial boiling point of 35°C or less and any flash point;
- Packing Group II, if they have an initial boiling point greater than 35°C and a flash point less than 23°C; or
- Packing Group III, if the criteria for inclusion in Packing Group I or II are not met.

When the packing group is unknown, use Packing Group I.

When the packing group is reasonably believed or is known to be II or III, use Packing Group II.

There are special rules for thick flammable liquids.

## **Class 4, Flammable Solids; Substances Liable to Spontaneous Combustion; Substances That on Contact with Water Emit Flammable Gases (Water-reactive Substances)**

### Class 4.1, Flammable Solids

- readily combustible
- under normal conditions of transport, liable to cause fire through friction,
- solid desensitized explosives
- self-reactive substances that are liable to undergo a strongly exothermic decomposition even without the oxygen (air),
- polymerizing substances that, without stabilization, are liable to undergo a strongly exothermic reaction

### Class 4.2, Substances Liable to Spontaneous Combustion

- pyrophoric substances that spontaneously ignite within 5 minutes after coming into contact with air
- self-heating substances that, when in large amounts (kilograms), spontaneously ignite on contact with air after long periods (hours or days)

### Class 4.3, Water-reactive Substances

- emit a flammable gas at a rate greater than 1 L/kg of substance per hour or spontaneously ignite

### Packing Groups – Division 4.1

- Packing Group I, if the substances are desensitized explosives;
- Packing Group II, if



- self-reactive
- the burning time of the substances is less than 45 seconds and the flame passes the wetted zone,
- for powders of metals or metal alloys, the zone of reaction of the substances spreads over the whole length of the sample in 5 minutes or less;
- Packing Group III, if
  - the burning time of the substances is less than 45 seconds and the wetted zone stops the flame propagation for at least 4 minutes,
  - for powders of metals or metal alloys, the zone of reaction of the substances spreads over the whole length of the sample in more than 5 minutes but not more than 10 minutes,
  - the substances are solids that are liable to cause fire through friction.

#### Packing Groups – Division 4.2

- Packing Group I, if the substances are pyrophoric solids or liquids;
- Packing Group II, if the substances are self-heating substances that give a positive result on tests; or
- Packing Group III for all other substances.

#### Packing Groups – Division 4.3

- Packing Group I, if the substances
  - react vigorously with water and demonstrate a tendency for the gas produced to ignite spontaneously, or
  - react readily with water at ambient temperatures so that the rate of evolution of flammable gas is greater than or equal to 10 L/kg of substance over any one minute
- Packing Group II, if
  - the substances react readily with water so that the rate of evolution of flammable gas is greater than or equal to 20 L/kg of substance per hour, and
  - the criteria for inclusion in Packing Group I are not met
- Packing Group III, if
  - the substances react slowly with water so that the rate of evolution of flammable gas is greater than or equal to 1 L/kg of substance per hour, and
  - the criteria for inclusion in Packing Group I or II are not met.

## Class 5, Oxidizing Substances and Organic Peroxides

### Class 5.1

- Oxidizing Substances, which yield oxygen thereby causing or contributing to fire
  - Javex

### Class 5.2, Organic Peroxides

- are thermally unstable organic compounds that contain oxygen in the bivalent “-O-O-” structure
- are liable to undergo exothermic self-accelerating decomposition,
- have one or more of the following characteristics:
  - they are liable to explosive decomposition,
  - they burn rapidly,

- they are sensitive to impact or friction,
- they react dangerously with other substances, or
- they cause damage to the eyes

### Packing Groups

- Packing Group I
  - if the test sample exhibits an average burning time that is
    - less than the mean burning time of a 3:2 potassium bromate/cellulose mixture by mass when test O.1 is used, or
    - greater than the mean burning rate of a 3:1 calcium peroxide/cellulose mixture by mass when test O.3 is used;
  - if the test sample in a 1:1 mixture by mass of substance and cellulose spontaneously ignites or the mean pressure rise time is less than that of a 1:1 mixture by mass of 50% perchloric acid and cellulose;
- Packing Group II
  - , if the criteria for Packing Group I are not met and the test sample exhibits an average burning time that is
    - less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture by mass, when test O.1 is used, or
    - equal to or greater than the mean burning rate of a 1:1 calcium peroxide/cellulose mixture by mass, when test O.3 is used;
  - if the mean pressure rise time is less than or equal to the mean pressure rise time of a 1:1 mixture by mass of 40% aqueous sodium chlorate solution and cellulose and the criteria for inclusion in Packing Group I are not met
- Packing Group III
  - if the criteria for Packing Groups I and II are not met and the test sample exhibits an average burning time that is
    - less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture by mass, when test O.1 is used, or
    - equal to or greater than the mean burning rate of a 1:2 calcium peroxide/cellulose mixture by mass, when test O.3 is used.
  - if the mean pressure rise time is less than or equal to the mean pressure rise time of a 1:1 mixture by mass of 65% aqueous nitric acid solution and cellulose and the criteria for inclusion in Packing Group I or II are not met.
- Class 5.2, Organic Peroxides, are included in Packing Group II

## Class 6, Toxic and Infectious Substances

### Class 6.1, Toxic Substances

- due to oral toxicity if its LD<sub>50</sub> (oral) is less than or equal to 300 mg/kg;
- due to dermal toxicity if its LD<sub>50</sub> (dermal) is less than or equal to 1 000 mg/kg; or
- due to inhalation toxicity
  - by dust or mist if dust or mist is likely to be produced in a transport accident and its LC<sub>50</sub> (inhalation) is less than or equal to 4 mg/L, or
  - by vapour if its LC<sub>50</sub> (inhalation) is less than or equal to 5 000 mL/m<sup>3</sup>.

### Class 6.2, Infectious Substances

- infectious substances
- An infectious substance is “a substance known or reasonably believed to contain viable micro-organisms such as bacteria, viruses, rickettsia, parasites, fungi and other agents such as prions that are known or reasonably believed to cause disease in humans or animals and that are listed in Appendix 3 to Part 2, Classification, or that exhibit characteristics similar to a substance listed in Appendix 3”
- For substances included in Class 6.2, Infectious Substances, a consignor may use a classification determined by the Public Health Agency of Canada or the Canadian Food Inspection Agency.

### Packing Groups

- Packing Group I
  - Known to be toxic but no tests to determine packing group (default)
  - LD<sub>50</sub> (oral) is less than or equal to 5 mg/kg
  - LD<sub>50</sub> (dermal) is less than or equal to 50 mg/kg
  - LC<sub>50</sub> (inhalation) is less than or equal to 0.2 mg/L
  - saturated vapour concentration is greater than or equal to 10 multiplied by the LC<sub>50</sub>, and the LC<sub>50</sub> is less than or equal to 1 000 mL/m<sup>3</sup>
- Packing Group II
  - LD<sub>50</sub> (oral) is greater than 5 mg/kg but less than or equal to 50 mg/kg
  - LD<sub>50</sub> (dermal) is greater than 50 mg/kg but less than or equal to 200 mg/kg
  - LC<sub>50</sub> (inhalation) is greater than 0.2 mg/L but less than or equal to 2 mg/L
  - saturated vapour concentration is greater than or equal to the LC<sub>50</sub>, the LC<sub>50</sub> is less than or equal to 3 000 mL/m<sup>3</sup>, and the criteria for Packing Group I are not met
- Packing Group III
  - LD<sub>50</sub> (oral) is greater than 50 mg/kg but less than or equal to 300 mg/kg
  - LD<sub>50</sub> (dermal) is greater than 200 mg/kg but less than or equal to 1 000 mg/kg
  - LC<sub>50</sub> (inhalation) is greater than 2 mg/L but less than or equal to 4 mg/L
  - saturated vapour concentration is greater than or equal to 0.2 multiplied by the LC<sub>50</sub>, the LC<sub>50</sub> is less than or equal to 5 000 mL/m<sup>3</sup>, and the criteria for inclusion in Packing Group I or II are not met
- Infectious substances have their own “categories”, roughly equivalent to packing groups.

### Class 7, Radioactive Materials

Classification is determined in accordance with the “Packaging and Transport of Nuclear Substances Regulations”

There are no divisions for Class 7.

There are no packing groups for Class 7.

### Class 8, Corrosives

Substances are included in Class 8, Corrosives, if they

- are known to cause skin lesions in humans that are permanent and destroy all layers of the outer skin through to the internal tissues;
- cause full thickness skin destruction in test animals
- do not cause full thickness skin destruction, but exhibit a corrosion rate that exceeds 6.25 mm per year at a test temperature of 55°C There are no divisions for Class 8.

### Packing Groups

- Packing Group I
  - known to be corrosive but no tests to determine packing group (default)
  - known to cause skin lesions in humans that are permanent and that destroy all layers of the outer skin through to the internal tissues
  - Known to cause full thickness destruction of intact skin tissue occurs within an observation period of 60 minutes after an exposure time of 3 minutes or less, as determined in accordance with OECD Guidelines
- Packing Group II
  - known to cause full thickness destruction of skin occurs within an observation period of 14 days after an exposure time of more than 3 minutes but not more than 60 minutes
- Packing Group III
  - known to cause full thickness destruction of intact skin tissue within an observation period of 14 days after an exposure time of more than 60 minutes but not more than 4 hours
  - exhibit a corrosion rate that exceeds 6.25 mm per year on steel or aluminum surfaces

### Class 9, Miscellaneous Products, Substances or Organisms

A substance is included in Class 9, Miscellaneous Products, Substances or Organisms, if it

- is included in Class 9 in column 3 of Schedule 1; or
- is not included in Class 9 in column 3 of Schedule 1 and does not meet the criteria for inclusion in any of Classes 1 to 8 and
  - is a marine pollutant
    - has a letter “P” (marine pollutant) in column 4 of Schedule 3
    - the substance meets technical criteria
    - For a liquid, the UN number and shipping name are UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., and for a solid, the UN number and shipping name are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
  - except for asphalt or tar, is offered for transport or transported at a temperature greater than or equal to 100°C if it is in a liquid state or at a temperature greater than or equal to 240°C if it is in a solid state,
    - For a liquid, the UN number and shipping name are UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S., and for a solid, the UN number and shipping name are UN3258, ELEVATED TEMPERATURE SOLID, N.O.S.

There are special rules for lithium cells and batteries

There are no divisions for Class 9.

Substances included in Class 9, Miscellaneous Products, Substances and Organisms, are included in Packing Group III unless they are included in a different packing group shown for them in column 4 of Schedule 1.



## Table of Precedence

Spaces in the table denote impossible combinations.

Class			4.2	4.3	5.1	5.1	5.1	6.1	6.1	6.1	6.1	8	8	8	8	8	8
	Packing Group	Code	All	All	I	II	III	I	I	II	III	I	I	II	II	III	III
								D	O	X	X	L	S	L	S	L	S
3	I							3	3	3	3	3		3		3	
3	II							3	3	3	3	8		3		3	
3	III							6.1	6.1	6.1	3	8		8		3	
4.1	II		4.2	4.3	5.1	4.1	4.1	6.1	6.1	4.1	4.1		8		4.1		4.1
4.1	III		4.2	4.3	5.1	4.1	4.1	6.1	6.1	6.1	4.1		8		8		4.1
4.2	II			4.3	5.1	4.2	4.2	6.1	6.1	4.2	4.2	8	8	4.2	4.2	4.2	4.2
4.2	III			4.3	5.1	5.1	4.2	6.1	6.1	6.1	4.2	8	8	8	8	4.2	4.2
4.3	I				5.1	4.3	4.3	6.1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4.3	II				5.1	4.3	4.3	6.1	4.3	4.3	4.3	8	8	4.3	4.3	4.3	4.3
4.3	III				5.1	5.1	4.3	6.1	6.1	6.1	4.3	8	8	8	8	4.3	4.3
5.1	I							5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
5.1	II							6.1	5.1	5.1	5.1	8	8	5.1	5.1	5.1	5.1
5.1	III							6.1	6.1	6.1	5.1	8	8	8	8	5.1	5.1
6.1	I	D										8	6.1	6.1	6.1	6.1	6.1
6.1	I	O										8	6.1	6.1	6.1	6.1	6.1
6.1	II	i										8	6.1	6.1	6.1	6.1	6.1
6.1	II	D										8	6.1	6.1	6.1	6.1	6.1
6.1	II	O										8	8	8	6.1	6.1	6.1
6.1	III	X										8	8	8	8	8	8

Note that Class 6.1 takes precedence if a substance is a pesticide under the "Pesticide Act" and is included in Class 6.1, Packing Group III, and in Class 3, Packing Group III





## Documentation

### Shipping Document: Minimum Information

<b>SHIPPING DOCUMENT</b>							
Consignor Name:							
Address:							
DATE:							
<b>REGULATED DANGEROUS GOODS</b>							
24-HOUR NUMBER:				<i>(Only if applicable)</i> ERAP reference #: ERAP telephone number:			
UN number	Shipping name (If applicable, Technical Name)	Primary Class	Subsidiary Class	Packing Group	Toxic by inhalation (SP 23)	Total Quantity (kg or L)	Number of packages requiring labels
I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, are properly classified and packaged, have dangerous goods safety marks properly affixed or displayed on them, and are in all respects in proper condition for transport according to the <i>Transportation of Dangerous Goods Regulations</i> .							
_____ Shipper's name (please print)							

**Shipping Document: Enhanced Information**

Yellow spaces are required information. Actual documents may omit the yellow.

SHIPPING DOCUMENT							
Consignor (Shipper) Name: Address:				Consignee (Destination) Name: Address:			
DATE:				Point of Origin:			
Name of Carrier: Transport unit #:				Shipping Document #:			
REGULATED DANGEROUS GOODS							
24-HOUR NUMBER:				(Only if applicable) ERAP reference #: ERAP telephone number:			
UN number	Shipping name (If applicable, Technical Name)	Primary Class	Subsidiary Class	Packing Group	Toxic by inhalation (SP 23)	Total Quantity (kg or L)	Number of packages requiring labels
<p>I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, are properly classified and packaged, have dangerous goods safety marks properly affixed or displayed on them, and are in all respects in proper condition for transport according to the <i>Transportation of Dangerous Goods Regulations</i>.</p> <p style="text-align: center;">_____ Shipper's name (please print)</p>							
NON REGULATED DANGEROUS GOODS							
Packages	Description of articles					Weight	
Received in apparent good order _____ Consignee's signature				Driver's #: _____ Driver's signature _____			

## Exercise: Shipping Document

Assume you are shipping methanol from your home office to your house. The carrier is Safety Transport Limited.

- 427 full 10-litre containers (each weighs 12 kg)
- 194 empty 10-litre containers (each weighs 5 kg)

1. Create a shipping document for the shipment
2. Assume 134 full 10-litre containers are dropped off at Home Depot en route. Modify the shipping document appropriately.


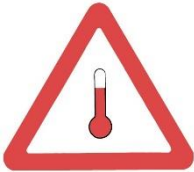






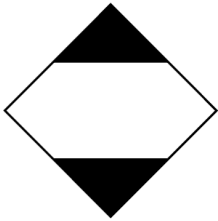
SHIPPING DOCUMENT							
Consignor (Shipper) Name: Address:				Consignee (Destination) Name: Address:			
DATE:				Point of Origin:			
Name of Carrier:  Transport unit #:				Shipping Document #:			
REGULATED DANGEROUS GOODS							
24-HOUR NUMBER:				<i>(Only if applicable)</i> ERAP reference #: ERAP telephone number:			
UN number	Shipping name (If applicable, Technical Name)	Primary Class	Subsidiary Class	Packing Group	Toxic by inhalation (SP 23)	Total Quantity (kg or L)	Number of packages requiring labels
<p>I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, are properly classified and packaged, have dangerous goods safety marks properly affixed or displayed on them, and are in all respects in proper condition for transport according to the <i>Transportation of Dangerous Goods Regulations</i>.</p> <p style="text-align: center;">_____ Shipper's name (please print)</p>							
NON REGULATED DANGEROUS GOODS							
Packages	Description of articles					Weight	
Received in apparent good order Consignee's signature _____				Driver's #:  Driver's signature _____			

# Safety Marks

## Common Safety Marks

Classes 1.1, 1.2, 1.3 Explosives	Class 1.4 Explosives	Class 1.5 Explosives	Class 1.6 Explosives	Class 2.1 Flammable Gases	Class 2.2 Non Flammable and Non-Toxic Gases
Class 2.3 Toxic Gases	Anhydrous Ammonia	Class 2.2(5.1) Oxidizing Gases and Oxygen	Class 3 Flammable Liquids	Class 4.1 Flammable Solids	Class 4.2 Substances Liable to Spontaneous Combustion
Class 4.3 Water Reactive Substances	Class 5.1 Oxidizing Substances	Class 5.2 Organic Peroxides	Class 6.1 Toxic Substances	**Class 6.2 Infectious Substances Label	Class 6.2 Infectious Substances
*Class 7 Cat. 1 Radioactive	*Class 7 Cat. 2 Radioactive	*Class 7 Cat. 3 Radioactive	**Class 7 Fissile Material Label	***Class 7 Radioactive Materials	Class 8 Corrosives
		* Label and optional placard  ** Label only  *** Placard only	<p>PLACARD LOCATIONS</p>		
Class 9 Misc. Products, Substances or Organisms	Danger Placard				

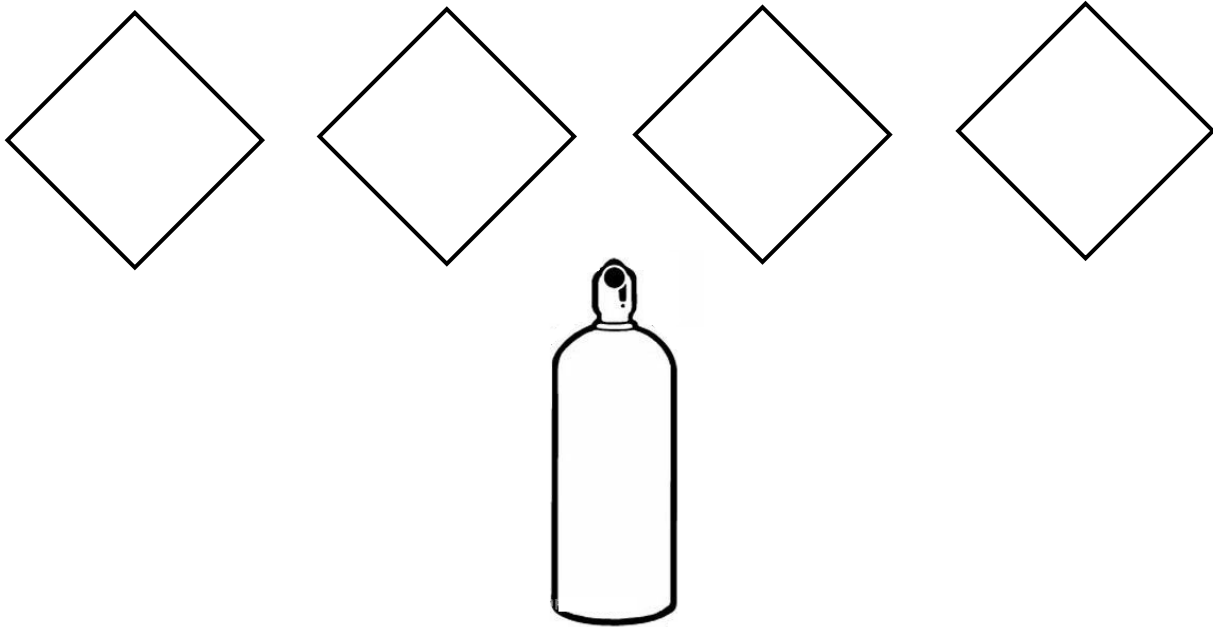
## Special Safety Marks

<p>Lithium Battery Mark</p>  <p>* Replace with UN number(s)          ** Replace with telephone number for additional information</p>	<p>Elevated Temperature Sign</p>  <p>Fumigation Sign</p> 
<p>Danger Placard</p> 	<p>Marine Pollutant Mark</p> 
<p>Anhydrous Ammonia Placard</p> 	<p>Category B Mark</p> 
<p>Excepted Quantity Mark</p>  <p>Replace * with the primary class          Replace ** with the name of the consignor or the consignee</p>	<p>Limited Quantities Mark</p> 

## Exercise: Safety Labels

You want to ship 5 chlorine cylinders

- Each 132 kg gross; 68 kgs net
- Draw the required labels and their placement



You want to ship:

- 12 four litre plastic bottles of methanol
  - Each bottle is contained inside a cardboard box
- 14 car batteries already filled with acid

They will all be on one pallet which will be shrink-wrapped.

Describe the labelling requirements.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

## Exercise: Safety Labels and Placards

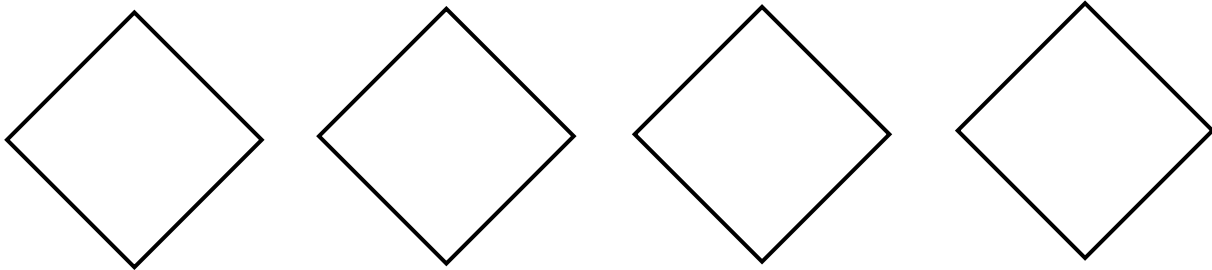
Assume you are shipping methanol from your home office to your house (same example as Shipping Document exercise)

- 427 full 10-litre containers (each weighs 12 kg)
- 194 empty 10-litre containers (each weighs 5 kg)

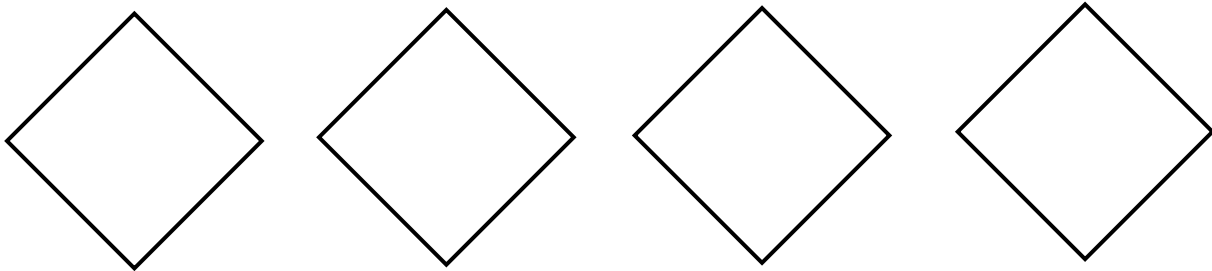
There are no other dangerous goods in the truck.

List the labelling and placarding requirements.

Labels:



Placards:



Where would the placards go?



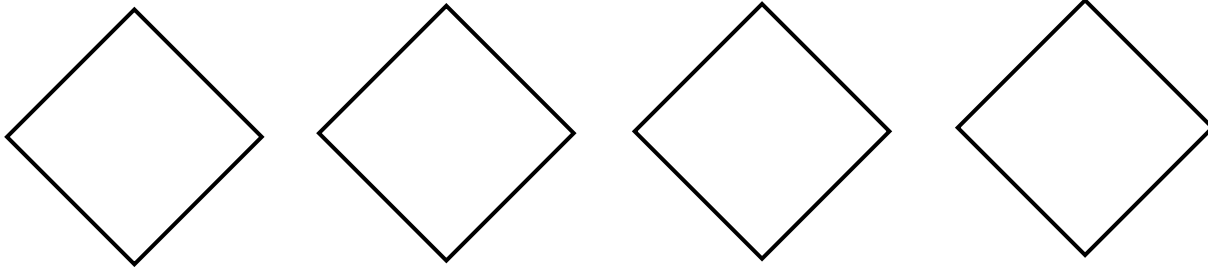


Assume you are shipping chemicals to three plants, using one truck. You start off with:

- 200 litres of acetone
- 50 kg of propane
- 100 litres of sulfuric acid

You drop off the acetone at Plant 1; the propane at plant 2; the sulfuric acid at Plant 3.






Describe the placards you would use at each stage in the journey.



## Means of Containment

### UN Safety Certification Marks

#### Examples:

	4G/Y145/S/02 NL/VL823	For a new fibreboard box
	1A1/Y1.4/150/98 NL/VL824	For a new steel drum to contain liquids
	1A2/Y150/S/01 NL/VL825	For a new steel drum to contain solids, or inner packagings
	4HW/Y136/S/98 NL/VL826	For a new plastics box of equivalent specification
	1A2/Y/100/01 USA/MM5	For a remanufactured steel drum to contain liquids

- #A/A###/A or #/###
- Packaging type/Packing group & density of contents/Solids or pressure rating/Year of manufacture
- AA/AA###
- Country of manufacture/Manufacturer's code

Chapter 6: UN Recommendations on the Transport of Dangerous Goods, Volume II

## Allowable Means of Containment for Class 2, Gases

Standard	Road	Rail	Ship	Air
<b>CGSB-43.123</b>	Class 2.1 or 2.2	Class 2.1 or 2.2	Class 2.1 or 2.2	Class 2.1 or 2.2
<b>CSA B340</b>	Yes	Yes	Yes	Yes
<b>CSA B342</b>	Yes	Yes	Yes	Yes
<b>CSA B622</b>	Except clause 4.3	No	Except clause 4.3	No
<b>CSA B625</b>	Yes	Yes	Yes	No
<b>TP14877</b>	If MOC is a ton container	Yes	Yes	No

CGSB-43.123: “Aerosol containers and gas cartridges for transport of dangerous goods”

CSA B340: “Selection and use of cylinders, spheres, tubes, and other containers for the transportation of dangerous goods, Class 2”

CSA B342: “Selection and use of UN pressure receptacles, multiple-element gas containers, and other pressure receptacles for the transport of dangerous goods, Class 2”

CSA B622: “Selection and use of highway tanks, TC portable tanks, and ton containers for the transportation of dangerous goods, Class 2”

CSA B625: “Portable tanks for the transport of dangerous goods”

TP14877: “Containers for Transport of Dangerous Goods by Rail, a Transport Canada Standard”

### Small Means of containment for Classes 3, 4, 5, 6.1, 8 and 9

Must use MOC that complies with:

- [Part II of CGSB-43.146: Design, manufacture and use of intermediate bulk containers for the transportation of dangerous goods](#)
- [Sections 2 and 3 and with Part 2 of TP14850: Small Containers for Transport of Dangerous Goods](#)

## Large Means of containment for Classes 3, 4, 5, 6.1, 8 and 9

Standard	Road	Rail	Ship
<b>CGSB-43.146</b>	<b>If it is a UN standardized MOC</b>	<b>If it is a UN standardized MOC</b>	<b>If it is a UN standardized MOC</b>
<b>CSA B621</b>	<b>Except clause 8.2(b)</b>	<b>No</b>	<b>Except clause 8.2(b)</b>
<b>CSA B625</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
<b>TP14877</b>	<b>If the MOC is a ton container</b>	<b>Yes</b>	<b>Yes</b>

CGSB-43.146: “Design, manufacture and use of intermediate bulk containers for the transportation of dangerous goods, classes 3, 4, 5, 6.1, 8 and 9”

CSA B621: “Selection and use of highway tanks, TC portable tanks, and other large containers for the transportation of dangerous goods, Classes 3, 4, 5, 6.1, 8, and 9”

CSA B625: “Portable tanks for the transport of dangerous goods”

TP14877: “Containers for Transport of Dangerous Goods by Rail, a Transport Canada Standard”

**Exercise: Means of Containment**

Assume you are shipping methanol from your home office to your house (same example as Shipping Document exercise)

- 427 full 10-litre containers (each weighs 12 kg)
- 194 empty 10-litre containers (each weighs 5 kg)

What standards must be met by the 10-Litre containers?

Any other standards to meet?

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

## Emergency Response Assistance Plans

An emergency response assistance plan (ERAP) outlines what is to be done to respond to an actual or anticipated release of dangerous goods during their handling or transporting that endangers, or could endanger, public safety

ERAP indices are in

- In kilograms for solids
- In litres for liquids
- For gases, as the capacity in litres of the means of containment

### When is an ERAP Required?

- Same UN number in a single MOC and exceeds the ERAP limit,
- More than one large MOC and total quantity of DG exceeds the ERAP limit, or
- Any quantity of DG that are Risk Group 4 human pathogens
  - The most dangerous pathogens (i.e., smallpox, Ebola)
- Class 2, Gases
  - have the same UN number
  - are contained in more than one means of containment
    - each of which is greater than 225 L
    - that are a single unit as a result of being interconnected through a piping arrangement, and
    - are permanently mounted on a structural frame for transport
  - if the total quantity of those dangerous goods exceeds the ERAP limit
- Transporting by road or rail in more than one MOC a quantity that exceeds the ERAP limit and are included in one of the following classes
  - Class 3, Flammable Liquids, with a subsidiary class of Class 6.1, Toxic Substances
  - Class 4, Flammable Solids, Substances Liable to Spontaneous Combustion, Substances That on Contact with Water Emit Flammable Gases
  - Class 5.2, Organic Peroxides, that are Type B or Type C
  - Class 6.1, Toxic Substances, included in Packing Group I.
- Transporting any of the following DG by rail in a tank car if the quantity of the DG in the tank car exceeds 10 000 L
  - Ethanol or ethanol/gas mixture
  - Gasoline
  - Diesel
  - Crude oil
  - Alcohols

Carrier or distributor who transports DG for which an ERAP is required, is not required to have an ERAP if the shipping document shows

- ERAP reference number and the telephone number to call to activate the ERAP held by a manufacturer, producer or another distributor of the DG, and

- person who holds the approved ERAP gives permission in writing for the ERAP to be used, and agrees to respond to an emergency on behalf of the carrier or distributor

## ERAP Contents

- Description of the operations
- Classification of DG to which the ERAP relates and the mode of transport used
- Frequency of transport of the DG
- Type and specification of the MOC
- Geographical area in which the DG are transported
- ERAP telephone number
- Description of the communications systems that will be available at the location of a release
- Name of any third-party emergency responders and their role
- Detailed list of equipment and its location
- Names and contact information for ERAP response personnel
- Measures that can be taken in response to the release or anticipated release
- Time required for the response personnel and equipment to reach the location of the release
- Potential incident analysis

## ERAP Reporting

If the DG that were or might be released were covered by an ERAP

A person who is required to report a release or anticipated release must, as soon as possible after the release or anticipated release, make an ERAP incident report

By telephone to the person at the ERAP telephone number included on the shipping document

if the DG are, or could be, in excess of the quantity set out in the regulations

### Information in an ERAP Incident Report

- Name and contact information of the person making the report
- ERAP reference number
- In the case of a release of dangerous goods
  - Date, time and geographic location of the release
  - Quantity of dangerous goods estimated to have been released
- In the case of an anticipated release, date, time and geographic location of the incident
- Mode of transport used
- Shipping name or un number of the dangerous goods

- Quantity of c that was in the means of containment before the release or anticipated release
- Description of the means of containment containing the dangerous goods
- An indication of whether the integrity of a means of containment has been compromised
- Whether a transfer of the dangerous goods to another means of containment is anticipated or required;
- Type of incident, including a collision, rollover, derailment, overfill, fire, explosion or load-shift

### ERAP Implementation Report

Report to CANUTEC whenever emergency response involves more simple pick-up

### Information in an ERAP Implementation Report

- Name and contact information of the person making the report
- ERAP reference number
- Whether the ERAP was implemented to tier 1 or 2
- The date and time that the ERAP was implemented
- Shipping name or UN number of the dangerous goods
- Measures taken to respond to the release or anticipated release

## Exercise: Emergency Response Assistance Plans

Assume you are shipping methanol from your home office to your house (same example as Shipping Document exercise)

- 427 full 10-litre containers (each weighs 12 kg)
- 194 empty 10-litre containers (each weighs 5 kg)

Do you need an ERAP? Why or why not?

---

---

---

---



## Reporting

### Release or Anticipated Release Report

#### Reporting Thresholds

Class	Packing Group or Category	Quantity
1	II	Any quantity
2	Not applicable	Any quantity
3, 4, 5, 6.1 or 8	I or II	Any quantity
3, 4, 5, 6.1 or 8	III	30 L or 30 kg
6.2	A or B	Any quantity
7	Not applicable	A level of ionizing radiation greater than the level established in section 39 of the “Packaging and Transport of Nuclear Substances Regulations, 2015”
9	II or III, or without packing group	30 L or 30 kg

Report to Whom?

Report	To Whom	When
Emergency Report	Local authority that is responsible for responding to emergencies at the geographic location	As soon as possible after release or anticipated release
Release or Anticipated Release Report	<ul style="list-style-type: none"> <li>• CANUTEC</li> <li>• Consignor of the dangerous goods</li> <li>• If Class 7, Radioactive Materials, the Canadian Nuclear Safety Commission</li> <li>• If a ship, a Vessel Traffic Services Centre or a Canadian Coast Guard radio station</li> </ul>	As soon as possible after making the Emergency Report
30-Day Follow-up Report	Director General	30 days after Release or Anticipated Release Report
30-Day Follow-up Report — Notice and Retention of Report	Director General	Whenever changes are made to 30-Day Follow-up Report

No Release or Anticipated Release Report is required unless the release or anticipated release resulted in

- Death of a person
- Person sustaining injuries that required immediate treatment
- Evacuation of people or their shelter in place
- Closure of
- Facility used in the loading and unloading of DG, or
- Road, a main railway line or a main waterway

Unless

- MOC has been damaged to the extent that its integrity is compromised
- Centre sill or stub sill of a tank car is broken or there is a 15 cm crack or greater in the metal

## Loss or Theft Report – All modes

Any person who has the charge, management or control of a means of containment must, as soon as possible after a loss or theft, report it by telephone to

- CANUTEC
- Class 1, Explosives, a Natural Resources Canada inspector
- Class 7, Radioactive Materials, the Canadian Nuclear Safety Commission

Must notify the persons above if the DG that were lost or stolen are recovered

### Loss or Theft Report – Reporting Limits

Any quantity

- explosives included in Class 1.1, 1.2 or 1.3
- toxic gases
- toxic substances included in Class 6.1 and Packing Group I
- infectious substances
- radioactive materials

Total quantity of 450 kg or more

- flammable gases
- desensitized explosives included in Class 3 or 4.1
- oxidizing substances included in Class 5.1 and Packing Group I or II
- corrosives included in Class 8 and Packing Group I or II.

The Regulations list more categories.

## Unlawful Interference Report – all modes

If there has been unlawful interference with DG while they were being transported, the person who had the charge, management or control of the DG must, as soon as possible after the discovery of the unlawful interference, report it by telephone to

- CANUTEC
- Class 1, Explosives, a Natural Resources Canada inspector
- Class 7, Radioactive Materials, the Canadian Nuclear Safety Commission

## Examples of unlawful interference from Transport Canada

- A cylinder valve is purposely damaged or altered
- DG in a container do not match the safety marks displayed on it
  - Ammonia for making of illegal drugs hidden in propane cylinders, etc.
- MOC is purposely damaged or altered
- The composition of DG in a container is purposely altered to lower their value
- Shipping document information is purposely altered

## Site Registration

### Who must register?

- Your organization imports, offers for transport, handles, or transports DG in Canada
- You do not have to register if all the DG at any of your sites are under one of the following exemptions:
  - You are only receiving DG that will be used in your scope of work and not transporting DG
  - Transporting DG originating from outside Canada and passing through Canada to a destination outside Canada without any handling being done in Canada
  - Transporting DG across the border, but you do not have headquarters or own or operate a site in Canada
  - Operation of oil wells
  - "Special Case" exemption under the Transportation of Dangerous Goods Regulations (TDGR)
    - Except a 500kg gross mass exemption

### Registration Details

- Business number
- Name and the address of their headquarters;
- Phone numbers and email addresses of both a contact person and their replacement when absent
- Addresses of all sites where DG are imported, offered for transport, handled or transported
- Mode of transport of dangerous goods used at each site
- For each site
  - Classes and divisions of DG that were imported, offered for transport, handled or transported within the previous fiscal year, if any
  - Importing, offering for transport, handling or transporting activities that were undertaken in the previous fiscal year, if any

## Renewals and Updates

- Must renew your registration annually within 30 days of the anniversary date of your initial registration
- Must update your business information within 60 days after the day on which any change occurs

## Client Identification Database (CID) Links

- Client Identification Database initial registration page is at <https://tc.canada.ca/en/dangerous-goods/client-identification-database-cid/initial-registration>
- The Client Identification Database FAQ page, including a is at <https://tc.canada.ca/en/dangerous-goods/client-identification-database-cid/frequently-asked-questions>
- The Client Identification Database questionnaire about who should register is at <https://tc.canada.ca/en/dangerous-goods/client-identification-database-cid/client-identification-database-questionnaire>
- There is a video tutorial at <https://tc.canada.ca/en/dangerous-goods/client-identification-database-cid/initial-registration#point-click>

## Notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

