

A technical publication from Alberta EDGE
(Environmental and Dangerous Goods Emergencies)

Dangerous Goods and the Agriculture Industry

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Dangerous Goods and the Agricultural Industry
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This material is meant as a guide to certain parts of the Transportation of Dangerous Goods Regulations and is not meant to be a substitute for them. It is the responsibility of handlers, offerers and transporters of dangerous goods to consult the Regulations for the exact requirements. Alberta EDGE (Environmental and Dangerous Goods Emergencies) of Alberta Transportation can provide accurate information regarding the Regulations 24 hours a day.

These telephone lines are recorded to assist in responding to the emergency (natural /manmade) and/or inquiry regarding Dangerous Goods and to ensure that the information is accurate. Direct any questions regarding the recording to the Regulatory Compliance Office responding to your call or contact the manager of Alberta EDGE at 780-427-8660. Legal Authority: Dangerous Goods Transportation and Handling Act, Section 13(1).

For more information regarding this bulletin visit:

<https://www.alberta.ca/safety-bulletins-and-notices-transportation-of-dangerous-goods.aspx>

Introduction

Alberta Transportation is responsible for administering the Transportation of Dangerous Goods (TDG) legislation for dangerous goods transport by road in Alberta. Alberta EDGE (Environmental and Dangerous Goods Emergencies) can be reached 24/7 at 780-422-9600 or toll free 1-800-272-9600, and is a valuable source of information on TDG Regulations.

This bulletin provides an overview of the TDG legislation and outlines procedures required to comply with the legislation for some common agricultural products.

Classification

According to Part 2 of the TDG Regulations, dangerous goods fall into the following nine classes:

- Class 1 - Explosives
- Class 2 - Gases
- Class 3 - Flammable liquids
- Class 4 - Flammable Solids, Substances Liable to Spontaneous Combustion, Substances That on Contact with Water Emit Flammable Gases (Water- reactive Substances)
- Class 5 - Oxidizing Substances and Organic Peroxides
- Class 6 - Toxic and Infectious Substances
- Class 7 - Radioactive Materials
- Class 8 - Corrosives
- Class 9 - Miscellaneous Products, Substances or Organisms

Some of these classes are further divided depending upon the nature or degree of hazard they present. For example, a flammable gas such as propane is a Class 2.1 (Flammable Gases).

Classifying a product is the responsibility of the manufacturer or importer of the product. Having classified their product, the manufacturer must also assign it a shipping name, a UN number and a packing group. Those working in the agricultural industry should ask their supplier if a product is classified as a dangerous good. If the product is a dangerous good, then the TDG Regulations must be followed.

Documentation

Part 3 of the TDG regulations requires a paper shipping document (not electronic) must accompany all dangerous goods shipments unless an exemption applies [Section 3.2(2)]. The supplier (consignor) must provide the transporter (carrier) with a shipping document for the dangerous goods.

If a shipping document is needed, specific information must be shown on the document. The following is the minimum required information that must appear on a shipping document:

| Shipping Document Information | When Required | Sections in the TDG Regulations |
|--|--|---------------------------------|
| Name and address of Consignor | Always | 3.5(1)(a) |
| Date | Always | 3.5(1)(b) |
| Description of dangerous goods in the following order: | | |
| a. UN number | Always | 3.5(1)(c)(i) |
| b. Shipping name | Always | 3.5(1)(c)(ii) |
| c. Technical name(s) of the most dangerous substance that contributes to the hazard(s). Must be listed in parenthesis. | Special Provision 16 of Schedule 2 applies | 3.5(1)(c)(ii)(A) |
| d. The words "not odourized" | For liquefied petroleum gas that has not been odourized | 3.5(1)(c)(ii)(B) |
| e. Primary classification | Always | 3.5(1)(c)(iii) |
| f. Compatibility group | Class 1 only | 3.5(1)(c)(iv) |
| g. Subsidiary classification(s) | Dangerous goods meet criteria for inclusion in more than one class | 3.5(1)(c)(v) |
| h. Packing group or "PG" in Roman numerals | Classes 1, 3, 4, 5, 6.1, 8, and 9 | 3.5(1)(c)(vi) |
| i. The words "toxic by inhalation" or "toxic - inhalation hazard" | Special Provision 23 of Schedule 2 applies | 3.5(1)(c)(vii) |
| The quantity in the International System of Units (SI) for each shipping name ^{1, 2, 3} | Classes 2, 3, 4, 5, 6, 7, 8, and 9 | 3.5(1)(d) |

| Shipping Document Information | When Required | Sections in the TDG Regulations |
|---|--|---------------------------------|
| Net explosive quantity (NEQ) | Class 1 only | 3.5(1)(d) |
| Number of articles or NEQ | Class 1 only, if subject to Special Provision 85 and 86 | 3.5(1)(d) |
| Number of small means of containment for each shipping name | One or more small means of containment requiring a label | 3.5(1)(e) |
| The words "24-Hour Number" followed by a telephone number at which the consignor can be reached immediately for technical information about the dangerous goods in transport ⁴ | Always | 3.5(1)(f) |
| Consignor's Certification ⁵ | Always, except for a large means of containment that contains a residue | 3.6.1 |
| ERAP reference number issued by Transport Canada, preceded or followed by "ERAP"; and the ERAP telephone number | When the quantity (solid, liquids, or explosives) of dangerous goods or capacity (gases only) of the means of containment that exceeds the ERAP Index in Column 7 of Schedule 1. | 3.6(1) |
| Control and emergency temperatures | Class 4.1 and 5.2 | 3.6(3)(b) & (c) |
| The words "FUMIGATED UNIT", Class 9, UN3359, quantity of fumigant, date of fumigation and instructions for disposal of residues of fumigant/fumigation device | Means of containment fumigated with dangerous goods and in Transport | 3.5(3) |
| Additional information for Class 7 ⁶ | Class 7 only | 3.6(3)(d) |

Notes:

1. If the means of containment contains a residue, the words "Residue – Last Contained" may be added before or after the description of the dangerous goods instead of the quantity of dangerous goods. The TDG Regulations define residue as "dangerous goods remaining in a

means of containment after its contents have been emptied to the maximum extent feasible and before the means of containment is either refilled or cleaned of dangerous goods and purged to remove any vapours.” The words “Residue – Last Contained” must not be used for dangerous goods included in Class 2, Gases that are in a small means of containment or for dangerous goods included in Class 7, Radioactive Materials [Subsection 3.5(4)].

2. Multiple Deliveries: If the quantity of dangerous goods required on a shipping document or the number of small means of containment changes during transport, the carrier must show the changes on the shipping document or on a document attached to the shipping document [Subsection 3.5(5)]. How the carrier shows the change in quantity is the carrier's choice. The carrier can change the number used to express quantity or the carrier may mark on the shipping document, or on a document attached to the shipping document, the additions or the subtractions from the number to express quantity.
3. The quantity of dangerous goods is expressed in kilograms for solids, in liters for liquids and in kilograms or litres for gases. It may also be expressed as a number of items.
4. The telephone number of someone who is not the consignor, such as CANUTEC (Canadian Transport Emergency Centre), but who is competent to give the technical information about the dangerous goods in transport, may be used instead. To use CANUTEC's telephone number, the consignor must receive permission, in writing, from CANUTEC. A consignor who uses the telephone number of an organization or agency other than CANUTEC must ensure that the organization or agency has current, accurate information on the dangerous goods the consignor offers for transport and, if the organization or agency is located outside Canada, the telephone number must include the country code and, if required, the city code [Section 3.5 (2)].
5. Consignor's Certification: “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 affixed or displayed on them, and are in all respects in proper condition for transport according to the Transportation of Dangerous Goods Regulations.” (Section 3.6.1).
6. Class 7, Radioactive Materials, have special documentation requirements. Additional requirements can be found in the “*Packaging and Transport of Nuclear Substances Regulation*”. Contact the Canadian Nuclear Safety Commission for more details. Dangerous goods shipped by air must be documented in a prescribed form known as the “Shipper's Declaration for Dangerous Goods” (Section 12.2). For details on alternate and additional documentation requirements, consult Part 3, Documentation, of the TDG Regulations or call Alberta EDGE at 1-800-272-9600.

During transport, the dangerous goods shipping document must be within reach of the driver. If the driver steps away from the vehicle during transport, the shipping document must be clearly visible to anyone entering the vehicle from the driver's side. If the dangerous goods are left in an unsupervised area, the


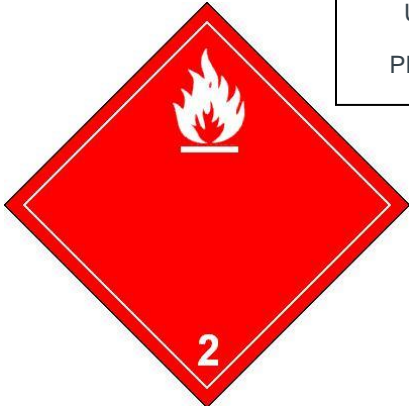
shipping document must be placed in a waterproof container securely attached to or near the means of containment holding the dangerous goods (Sections 3.7 and 3.10).

A shipping document template is provided at the end of this bulletin.

Safety Marks

Labels on Small Means of Containment

Safety marks are the placards, labels and markings required by Part 4 the TDG Regulations. The Regulations require small means of containment (450 L capacity or less) to display the appropriate class label for that dangerous good. A small container must display dangerous goods label(s) for the primary and subsidiary hazard classes, as well as the shipping name and UN number of the product [Sections 4.10 to 4.12]. The label must be at least 100 mm on each side. If the container is too small or has an irregular shape, the label can be reduced in size, but must be at least 30 mm [Section 4.7(2)].

| Example of Safety Marks for a Small Means of Containment | |
|--|---|
| In this case the product is UN1978, PROPANE, Class 2.1 | |
|  <p>A red diamond-shaped label with a white flame icon at the top, the UN number '1978' in a white box in the center, and the class number '2' at the bottom.</p> |  <p>A red diamond-shaped label with a white flame icon at the top and the class number '2' at the bottom.</p> |
| Class 2.1 label is red with a small white flame | |

Placards on Large Means of Containment

Placards representing the primary and subsidiary class of the dangerous goods being transported must be placed on all four sides of a large container (capacity greater than 450 L) or transport unit.

Each side of a placard must be at least 250 mm in length. Except for the DANGER placard, all placards must have a line running 12.5 mm inside the edge. If the large container has an irregular shape, the placard can be reduced in size but must never be less than 100 mm on each side [Section 4.7(3)].

The primary class placard must be displayed if the dangerous goods are in a large container. If two or more dangerous goods have different UN numbers but are in the same Class, only one placard displaying the class is needed per side of the vehicle.

A UN number must be displayed with the placard if the dangerous goods are:

- in a quantity or concentration for which an ERAP is required; or
- a liquid or a gas in direct contact with the large container (i.e. in a tank) (Section 4.15.2).

If a UN number is required, it must be displayed on the placard or on an orange panel next to the placard. The letters "UN" are always omitted [Section 4.8(2)].

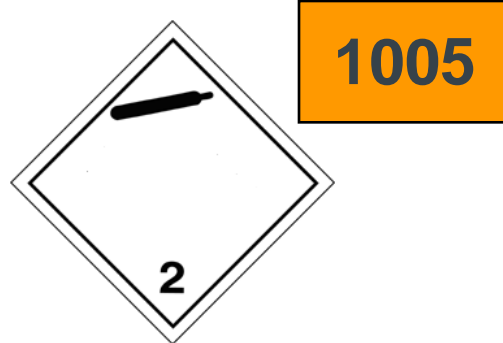
A **subsidiary class placard** must also be displayed on each side and each end of a large means of containment for dangerous goods for which an ERAP is required and that have a subsidiary classification of:

- Class 1: the placard will be the same as for Classes 1.1, 1.2 and 1.3.
- Class 4.3.
- Class 6.1, in Packing Group I.
- Class 8, and the UN number is UN2977 and UN2978 (both these products are uranium
- hexafluoride radioactive material, the placard will be the same as for Class 8 (Section 4.15.1).

Example of Safety Marks for a Large Means of Containment

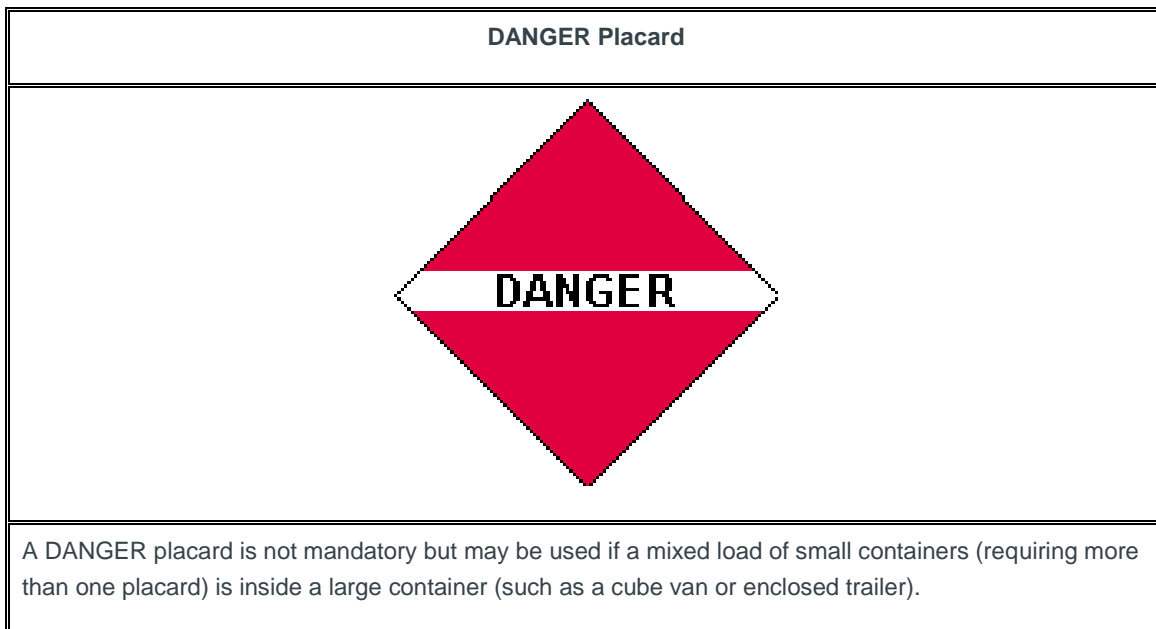
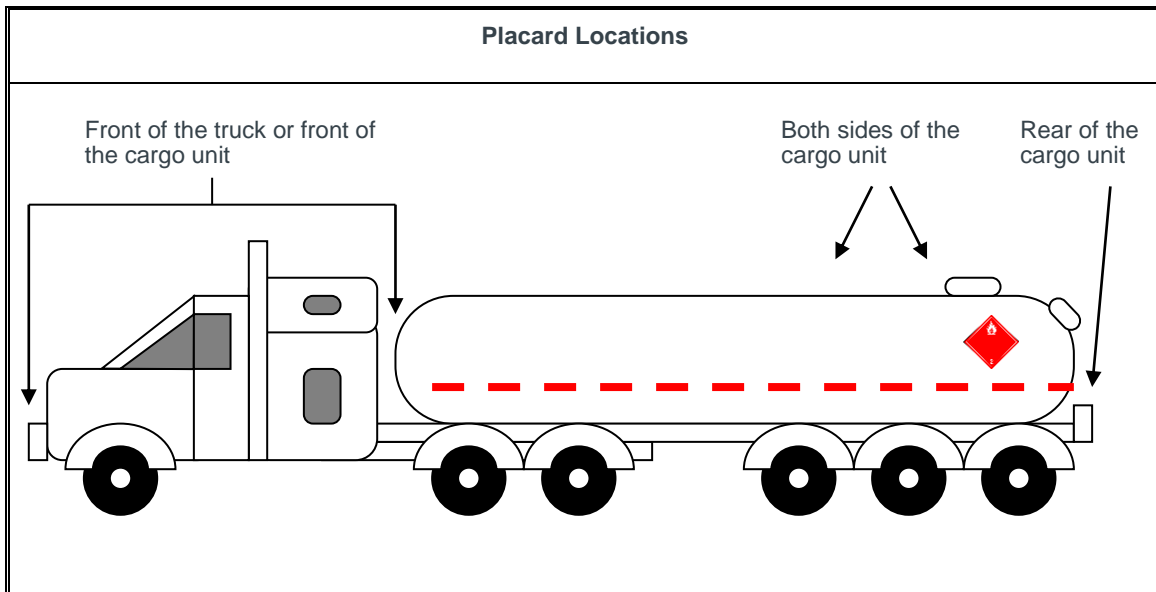
In this case the product is

UN1005, ANHYDROUS AMMONIA, Class 2.3(8)



UN1005 placards are specifically for this product only; they may not be used for other Class 2.3 products. If this is used, then the tank must display the words "Anhydrous Ammonia, Inhalation Hazard" on a contrasting background in letters at least 6 mm wide and 50 mm high (Section 4.18.2)

The placards must be displayed on each side and each end of the container (4 placards total). The placards may be displayed on the frame of the means of transport or a frame directly attached to the large container. The placard may also be placed at the front of the truck instead of the front of a cargo unit attached to the truck [Section 4.15(3)].



The DANGER placard must **not** be displayed on a large means of containment for [Section 4.16 (2)]:

1. Dangerous goods that have a gross mass greater than 1,000 kg, are included in the same class and are offered for transport by one consignor;
2. Dangerous goods that require an ERAP;
3. Dangerous goods included in Class 1, Explosives;
4. Dangerous goods included in Class 2.3, Toxic Gases;
5. Dangerous goods included in Class 4.3, Water-reactive Substances;
6. Dangerous goods included in Class 5.2, Organic Peroxides, Type B, liquid or solid, that require a control or emergency temperature;
7. Dangerous goods included in Class 6.1, Toxic Substances, subject to Special Provision 23;
8. Dangerous goods included in Class 7, Radioactive Materials that require a Category III – Yellow label.

Means of Containment

A person must not accept or transport dangerous goods if they are not properly packaged, as per Part 5 of the regulations. Containers used for transport must be in good condition as well as built and maintained to a specific Safety Standard, so as not to cause a spill while being transported. If they are built to a Safety Standard they will have the UN symbol (see below) embossed or on a sticker on the container.



Containers for transporting dangerous goods are built to a safety standard.

Training

Anyone who handles, offers for transport or transports dangerous goods must have a valid Transportation of Dangerous Goods Training Certificate or must be under the direct supervision of a trained person (Section 6.1).

A person is adequately trained if they have sound knowledge of the topics listed below that relate directly to their duties (Section 6.2):

- classification criteria and test methods (Part 2, Classification);
- shipping names;
- shipping documentation (Part 3, Documentation);
- safety mark requirements (Part 4 Dangerous Goods Safety Marks);
- certification safety marks, safety requirements and safety standards, (Part 5, Means of Containments);
- ERAP requirements (Part 7, ERAP);
- reporting requirements (Part 8);
- safe handling and transportation practices including characteristics of the dangerous goods being handled;
- use of Schedule 1, 2, and 3;
- proper use of equipment to handle or transport the dangerous goods; and
- emergency measures to take in case of releases.

The employer issues a training certificate when he/she has reasonable grounds to believe that an employee possesses adequate training. The training certificate may be in paper or electronic format. A training certificate must have the following information [Section 6.3(1)]:

- the name and address (including postal code) of the employer;
- the name of the employee;

- the date the training certificate expires, preceded by the words “Expires on”. A training certificate expires 3 years after being issued;
- the aspects of handling, offering for transport or transporting dangerous goods for which the employee is trained; and
- the signatures of the employer and the employee.

Self-employed people can issue training certificates for themselves. The employer must keep a record of the training the employee has received and a copy of their training certificate for two years after the date of expiration (Section 6.6).

Emergency Response Assistance Plan

An ERAP (Emergency Response Assistance Plan) is required as per Part 7, in instances where very hazardous dangerous goods are transported in quantities, which may pose a threat to public safety. For this reason, the TDG Regulations requires consignors and importers of dangerous goods to have an approved ERAP.

An ERAP is required if the amount of dangerous goods contained in a single container exceeds the limit described in Column 7 of Schedule 1 of the TDG Regulations (Section 7.1). Consignors and importers of dangerous goods must ensure that quantities of dangerous goods over the ERAP quantity limit are accompanied by an ERAP.

If you are not sure whether a consignment of dangerous goods requires an ERAP, you may call Alberta EDGE (1-800-272-9600). You can obtain information on ERAPs at this web site:

<https://tc.canada.ca/en/dangerous-goods/emergency-response-assistance-plans>.

Reporting Requirements

The person in possession of dangerous goods at the time of a release or anticipated release must make a verbal Emergency Report to the local authorities as soon as possible. An Emergency Report is required when the quantity of dangerous goods that was or may have been released exceeds the amount set out in the following table [Section 8.2]. More information on reporting requirements can be found in Alberta EDGE's information bulletin entitled Reporting Requirements.

| 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, or without packing group | 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 "Packing and Transport of Nuclear Substances Regulations, 2015" |
| 9 | II or III or without packing group | 30 L or 30 kg |

A local authority is any organization that may be responsible for emergency response at the location of the release or anticipated release. In Alberta, these include:

- the local police or RCMP, and
- Alberta EDGE.



The person making the Emergency Report must also make a verbal Release or Anticipated Release Report to CANUTEC (1-888-226-8832 or 613-996-6666) if (Section 8.4):

- a fatality occurred;
- there were any injuries caused by exposure to the dangerous goods which required medical treatment by a health care provider;
- an evacuation occurred or people sheltered in place;
- a loading or unloading facility, road, main rail line or main waterway was closed;
- the container failed or became damaged enough to compromise its integrity (this includes any damage or failure to hoses and gaskets); or
- the centre sill or stub sill of a tank car was broken or there is a crack in the metal equal to or greater than 15 cm (6 in.).

If a verbal Release or Anticipated Release report is required to CANUTEC, the person must also report the incident to the consignor of the dangerous goods.

The information that must be included in the Emergency or Release or Anticipated Release Report is:

- the name and contact information of the person making the report;
- the date, time and location of the event;
- the mode of transport used (including a description of the container);
- the shipping name or UN number of the dangerous goods;
- the quantity of dangerous goods initially in the container;
- the quantity of dangerous goods released (if applicable);
- the type of incident leading to the event (for example: collision, roll-over, derailment, overfill, fire, explosion or load-shift);
- the name and geographic location of any road, main railway or main waterway that was closed (if applicable);
- the number of people evacuated or sheltered in place (if applicable); and

- the number of fatalities or injuries (if applicable).

A report can also include other information not required by the regulations (for example, any cleanup arrangements, or involvement of other emergency response agencies like the police, fire department, Alberta Environment and Parks or the Alberta Energy Regulator).

After submitting a verbal Release or Anticipated Release report to CANUTEC, the person or employer of the person who made the report must submit a 30-day follow-up written report to the Dangerous Goods Directorate of Transport Canada (Section 8.8). In addition to the information listed above, the 30-Day Follow-up Report must include:

- names and contact information of the consignor, carrier and consignee;
- classification of the dangerous goods (Including UN number, shipping name, class and packing group);
- a description of the container involved and a description of the failure or damage including how the event occurred;
- information about the conditions leading to the event;
- information on any fire or explosion (if applicable);
- the duration of any facility, road, railway or waterway closure;
- the ERAP reference number (if applicable);
- the date the initial verbal report was made; and
- an estimate of the financial loss as a result of the release/anticipated release and any associated, emergency response or remediation.

A 30-day report must be kept for two years after the day on which it was made. The report must be available to an inspector within 15 days of a written request.

Loss or Theft of Dangerous Goods

A person is required to report the loss or theft of dangerous goods as soon as possible, as per section 8.16. Reportable quantities of some dangerous goods that may have agricultural application are as follows.

Theft of any quantity:

- UN1357, Urea Nitrate (fertilizer);
- UN1485, Potassium Chlorate (pesticide);
- UN1486, Potassium Nitrate (fertilizer);
- UN1495, Sodium Chlorate (herbicide);
- UN1498, Sodium Nitrate (fertilizer);
- UN1499, Sodium nitrate and Potassium nitrate mix; or
- Dangerous goods with a primary or secondary class of:
 - Class 1.1, 1.2 or 1.3 (explosives);
 - Class 2.3 (Toxic Gases);
 - Class 5.2, Type B (liquid or solid, temperature controlled Organic Peroxides);
 - Class 6.1 Packing Group I (Toxic Substances);
 - Class 6.2 (Infectious Substances); or
 - Class 7 (Radioactive Materials).

Theft of 450 kg or more:

- Class 1.4 (except 1.4S), 1.5 or 1.6 (Explosives);
- Class 2.1 (Flammable Gases);
- Class 3 (Flammable Liquids);
- Class 3 or 4.1 (Desensitized Explosives);
- Class 4.2 Packing Group I or II (Substances Liable to Spontaneous Combustion, Pyrophoric Solids or Liquids);
- Class 4.3 Packing Group I or II (Water-Reactive Substances);
- Class 5.1 Packing Group I or II (Oxidizing Substances); or

- Class 8 Packing Group I or II (Corrosives)

For the complete list of reportable quantities, please see Part 8.16 of the TDG Regulations.

Reports of the loss or theft of dangerous goods must be made to:

- CANTUEC (1-888-226-8832 or 613-996-6666);
- For Class 1 (Explosives) a Natural Resources Canada Inspector (613-995-5555); or
- For Class 7 (Radioactive Materials) the Canadian Nuclear Safety Commission.

Information, which must be included in the loss or theft report:

- Name and contact information of the person making the report;
- Names and contact information of the consignor, consignee and the carrier;
- If the dangerous goods were lost or stolen;
- Shipping name or UN number of the dangerous goods;
- Quantity of the lost or stolen dangerous goods;
- A description of the container of the dangerous goods; and
- Approximate date, time and location of the loss or theft.

Common Dangerous Goods in Agriculture

Pesticides

Regulated pesticides are often classified as Class 6.1 (poisonous substances) due to their toxicity. The safety mark for products in Class 6.1 is a white diamond with a skull-and-crossbones and numeral "6" in the toe of the diamond.



Some regulated pesticides may also be classified as Class 3 flammable liquids because of the solvents used as carriers for the active ingredients. In this case, the safety mark would be a red diamond with a white flame in it. There would be a numeral "3" in the toe of the diamond.



Check with your bulk dealer or manufacturer for the classification of any product you use. The classification can be different for both the full strength and diluted products. If transporting the product in diluted form it may not be regulated under the TDG Regulations. Check with your bulk dealer or the manufacturer to determine if the classification changes under certain conditions.

Anhydrous Ammonia (UN1005) Marks

Anhydrous ammonia is classified as UN1005, ANHYDROUS AMMONIA, Class 2.3(8) (Primary class – Toxic Gas, Subsidiary Class – Corrosive). The safety mark for anhydrous ammonia is a white diamond on point, with a black cylinder silhouette at the top and the number 2 in the bottom point. The UN number (1005) is included in the middle of the placard. The class 2.3 placard (white diamond on point with skull

and crossbones in the top point, and the number 2 in the bottom point) may also be used provided the UN number is on the placard. If the anhydrous ammonia placard is used, the container must also have the words “Anhydrous Ammonia, Inhalation Hazard” on at least two sides. The words must be at least 6mm wide and 50 mm high. This is found in section 4.18.2 of the TDG Regulations.



ANHYDROUS AMMONIA

CLASS 2.3

Anhydrous Ammonia requires an ERAP if it is transported in a means of containment over 3,000 L.

Exemptions

The following exemptions to the TDG Regulations may be of interest to those in the agricultural industry.

150 kg Gross Mass Exemption

Shipping document, safety marks, standardized container, TDG training and release reporting requirements do not apply to a dangerous goods load if (Section 1.15):

- Class 2 Gases are in small cylinders (less than 450L),
- other Classes of dangerous goods are in containers less than 30 kg, and will not spill during transport;
- the total mass of all dangerous goods on the transportation unit is less than or equal to 150 kg;

- the dangerous goods are in a quantity available to the general public and are transported:
 - by a user or purchaser of the dangerous goods, or
 - by a retailer to or from a user or purchaser of the dangerous goods.

This exemption cannot be used if the dangerous goods:

- require an ERAP;
- require a control or emergency temperature;
- are explosives (Class 1), except for:
 - *UN0012, UN0014, UN0044, UN0055, UN0105, UN0131, UN0161, UN0173, UN0186, UN0191, UN0197, UN0276, UN0312, UN0323, UN0335 if classified as a consumer firework, UN0336, UN0337, UN0351, UN0373, UN0378, UN0404, UN0405, UN0431, UN0432, UN0454, UN0499, UN0501, UN0503, UN0505, UN0506, UN0507, UN0509, and UN0510;*
- are included in:
 - Class 2.1, Flammable Gases containers larger than 46 L;
 - Class 2.3, Toxic Gases;
 - Class 4, Flammable Solids Packing Group I;
 - Class 5.2, Organic Peroxides, not permitted as Limited Quantities;
 - liquids in Class 6.1, Toxic Substances, and Packing Group I;
 - Class 6.2, Infectious Substances; or
 - Class 7, Radioactive Materials, and are required to be licensed by the Canadian Nuclear Safety Commission.

500 kg Gross Mass Exemption

Full shipping document, safety marks, and a standardized container do not apply to the transportation of dangerous goods if (Section 1.16):

- Class 2 Gases are in cylinders;

- other classes of dangerous goods are in containers less than 30 kg that will not spill during transport, or drums that are in compliance with section 5.12 of Part 5.
- the gross mass of all dangerous goods is less than 500 kg;
- the dangerous goods are accompanied by a modified shipping document that is located within easy reach of the driver. The shipping document must include the following information in the following order:
 - the primary class of the dangerous goods in each container following the word “Class”,
 - the total number of containers which require a dangerous goods safety mark following the words “number of means of containment”, and,

For example, Class 3, number of means of containment, 10
- each container has displayed on a side which it is not intended to rest on
 - the required dangerous goods safety marks; or
 - if either the “Pest Control Products Act” or the “Hazardous Products Act” are applicable, the marks required by these Acts must be visible
- this exemption requires that the person transporting the dangerous goods has dangerous goods training.

This exemption cannot be used if the dangerous goods:

- require an ERAP;
- require a control or emergency temperature;
- are included in Class 1, Explosives, except for Class 1.4S or UN0191, UN0197, UN0276, UN0312, UN0336, UN0403, UN0431, UN0453 and UN0493;
- are included in:
 - Class 2.1, Flammable Gases in a cylinder larger than 46 L;
 - Class 2.3, Toxic Gases;
 - Class 4, Flammable Solids, Packing Group I;

- Class 5.2, Organic Peroxides, that are over the Limited Quantities limit;
- Class 6.1 (liquids), Toxic Substances, Packing Group I;
- Class 6.2, Infectious Substances; or
- Class 7, Radioactive Materials, and are required to be licensed by the Canadian Nuclear Safety Commission.

Limited Quantities Exemption

A quantity of dangerous goods, other than explosives, is a limited quantity if (Section 1.17):

- they are in containers which will not spill during transport;
- each outer container is less than 30 kg; and
- each inner container has a quantity less than the number shown in column 6(a) of Schedule 1 (in kg for solids and litres for liquids and gases).

Limited quantities of dangerous goods are exempt from documentation, safety marks, standardized container, training, ERAP and release reporting requirements if each container is legibly and durably marked on a side, which will be visible during transport, with one of the marks illustrated below.

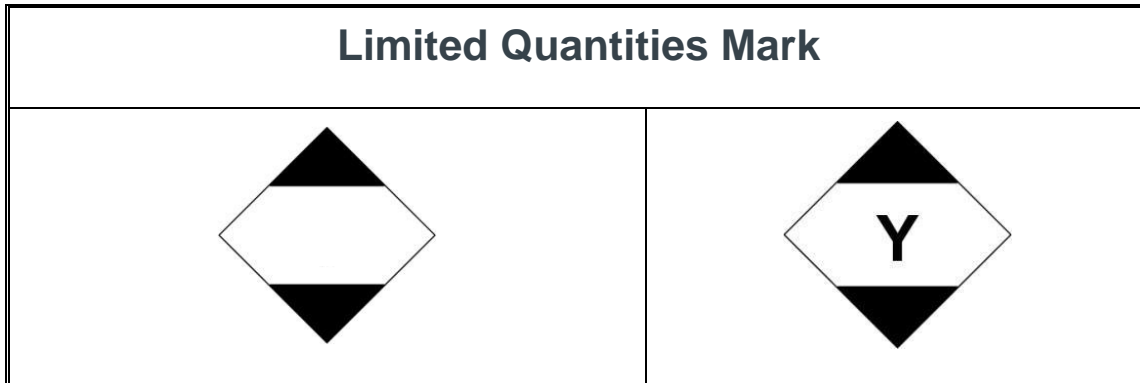
When a limited quantity of dangerous goods is in a container that is inside another container, the inner container does not need to be marked if:

- the gross mass of the outer container is less than 30 kg;
- the outer container is not intended to be opened during transport; and
- the outer container is legibly and visibly marked, on a contrasting background, with the mark illustrated below.

If the limited quantity of dangerous goods is in an overpack, the following information must be displayed on the overpack unless the marks on the small containers are visible through the overpack:

- the word “Overpack”; and
- the mark illustrated below, legibly and visibly marked on a contrasting background.

The line forming the square on point must be at least 2 mm wide. Each side of the mark must be at least 100 mm long. The letter “Y” may be displayed in the centre of the mark if the limited quantity is in compliance with the ICAO Technical Instructions. The size may be reduced to 50 mm, if the mark remains clearly visible, if regular labels will not fit on the package.



Agriculture: 1,500 kg Gross Mass Farm Vehicle Exemption

Shipping documents, safety marks, standardized containers and TDG training are not required if (Section 1.21):

- Class 2 gases are in cylinders;
- the dangerous goods are in containers which will not spill during transport;
- the vehicle used for transport is a licensed farm vehicle;
- the dangerous goods are transported solely on land and the distance on public roads is less than or equal to 100 km;
- the gross mass of all dangerous goods on the vehicle is 1,500 kg or less;
- the dangerous goods are used by a farmer for farming purposes; and
- the dangerous goods do not include:
 - Class 1, Explosives (except for Class 1.4S),
 - Class 2.1, Flammable gases cylinders over 46L,
 - Class 2.3, Toxic Gases,

- Class 6.2, Infectious Substances, or
- Class 7, Radioactive Materials.

If an ERAP is required, the dangerous goods must be accompanied by a shipping document.

Agriculture: 3,000 kg Gross Mass Farm Retail Exemption

Shipping documents, safety marks, and standardized containers are not required if (Section 1.22):

- the dangerous goods are transported solely on land between a retail place of purchase and the destination for a distance on public roads that is less than 100 km;
- Class 2, Gases, are in cylinders;
- the dangerous goods are in containers which will not spill during transport;
- the gross mass of all dangerous goods on the vehicle is less than 3,000 kg;
- the dangerous goods will be used or have been used by a farmer for farming purposes; and
- the dangerous goods do not include:
 - Class 1, Explosives (except Class 1.4S),
 - Class 2.1, Flammable Gases, in cylinders over 46 L,
 - Class 2.3, Toxic Gases,
 - Class 6.2, Infectious Substances, or
 - Class 7, Radioactive Materials.

You will need TDG training to use this exemption. If an ERAP is required, a TDG shipping document will be required.

Agriculture: Pesticide Exemption

This section provides an exemption from documentation, UN number requirements and TDG training if the pesticides are transported (Section 1.23):

- for a distance solely on land less than or equal to 100 km;
- in a container that has a capacity of 6,000 L or less and is used to prepare the pesticides for application; and
- only one large container is in transport on the road vehicle.

Placards must be displayed on all four sides of the container. If an ERAP is required, the dangerous goods must be accompanied by a shipping document.

Agriculture: Anhydrous Ammonia Exemption

As per Section 1.24, when transporting anhydrous ammonia by road in a field application tank (e.g., a Nurse Tank) with a capacity of 10,000 L or less for a distance on public roads less than 100 km then a shipping document and an ERAP are not required. Safety marks for the tank and TDG training are still required.

Class 2, Gases, in Small Means of Containment Exemption

Several gases used for welding and related purposes are exempt from documentation and training requirements of the TDG Regulations if (Section 1.32.3):

- the gross mass of dangerous goods is less than or equal to 500 kg;
- the dangerous goods are contained in cylinders;
- the load is no more than 5 cylinders; and
- the labels are visible from the outside of the vehicle or displayed on the vehicle if the cylinders cannot be seen from outside the vehicle.

This exemption applies to:

- UN1001, ACETYLENE, DISSOLVED;
- UN1002, AIR, COMPRESSED;
- UN1006, ARGON, COMPRESSED;
- UN1013, CARBON DIOXIDE;

- UN1060, METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED;
- UN1066, NITROGEN, COMPRESSED;
- UN1072, OXYGEN, COMPRESSED; or
- UN1978, PROPANE.

Class 3, Flammable Liquids: General Exemption

Shipping documents, safety marks, standardized containers, and training are not required to transport Class 3, Flammable Liquids if they (Section 1.33):

- have no subsidiary class;
- have a flash point above 37.8 °C and are Packing Group III; and
- are in a small containers which will not spill during transport.

This exemption is applicable to diesel but not to gasoline.

UN1202, DIESEL FUEL, or UN1203, GASOLINE, Exemption

Shipping documents, UN numbers and training are not required when transporting gasoline (UN1203) or diesel (UN1202) by road if (Section 1.35):

- the total capacity of all the containers is less than or equal to 2,000 L;
- each of the containers displays the label or placard required;
- at least one label or placard on each container is visible from outside the vehicle during transport; and
- the container is visible from outside the vehicle during transport.

For example: a slip tank with a capacity between 450 L and 2,000 L only requires one visible Class 3 placard secured to the tank.

Small containers of gasoline must display the proper label (Class 3). Small containers of diesel can follow the exemption listed above [Class 3, Flammable Liquids: General Exemption (Section 1.33)].

Ammonium Nitrate Fertilizer Solutions or Mixtures

When transporting ammonium nitrate or ammonium nitrate fertilizer or mixture by road, shipping document, safety mark, or TDG training requirements do not apply if:

- the fertilizer was purchased by retail sale and is transported between the place of purchase, the place of use, or the purchaser's residence;
- the quantity of fertilizer must be less than or equal to 13.6 tonnes; and
- the shipment is accompanied by a record sheet that includes the shipping name, the UN number and the quantity of fertilizer mixture or solution.

This is from Special Provision 37 (Schedule 2), and it applies to UN1942, and UN2067.

Miscellaneous Special Cases

The TDG Regulations do not apply to (Section 1.46):

- ammoniating fertilizer solutions with an absolute pressure of ammonia less than or equal to 276 kPa at 41 °C;
- fish meal that is acidified and is wetted with 40% or more water, by mass;
- solvent extracted soya bean meal free of flammable solvent and containing 1.5% or less oil, by mass, and 11% or less moisture, by mass; or
- wood or wood products treated with wood preservatives.

The dealer will know which products sold fit into these categories.

Spraying by Aircraft

When transporting dangerous goods by aircraft for the purposes of aerial agricultural work (Section 12.12):

- the dangerous goods must be in a container that is an integral part of the aircraft or is attached in accordance with the Certificate of Airworthiness issued under the "Canadian Aviation Regulations";

- the air carrier must ensure the person who loads and secures the dangerous goods on board is trained or works under the direct supervision of a person who is trained in accordance with the TDG Regulations and Chapter 4, Training, of Part 1, General, of the ICAO Technical Instructions;
- the air carrier must comply with the release reporting requirements of the TDG Regulations;
- if the pilot-in-command does not load or directly supervise the loading of the dangerous goods, the person who loads and secures the dangerous goods must give the pilot-in-command a written document with the shipping name, UN Number, Class and gross mass of each of the dangerous goods on board;
- smoking is prohibited on board the aircraft;
- each area or compartment of the aircraft containing dangerous goods must be ventilated to prevent accumulation of vapour;
- when an in-flight emergency occurs and circumstances permit, the pilot-in-command must comply with Section 4.3, Information by Pilot-in-command in Case of In-flight Emergency, of Chapter 4, Provision of Information, of Part 7, Operator's Responsibilities, of the ICAO Technical Instructions;
- the person who loads and secures or directly supervises the loading and securing of dangerous goods on board the aircraft must comply with Section 3.1, Inspection for damage or leakage, of Chapter 3, Inspection and decontamination, of Part 7, Operator's Responsibilities, of the ICAO Technical Instructions; and
- the person who loads the aircraft must segregate the containers loaded with dangerous goods that could react dangerously with one another in case of an accidental release in accordance with Table 7-1 entitled "Segregation between packages", of Chapter 2, Storage and loading, of Part 7, Operator's Responsibilities, of the ICAO Technical Instructions.

Classification of Common Chemicals

Table 1: Non-Regulated Fertilizers

| Common Name | Fertilizer Type | UN # | Class |
|-------------|-----------------------------------|------|---------------|
| 21-0-0 | Ammonium Sulfate | | Not Regulated |
| 16-20-0 | Ammonium Phosphate Sulfate | | Not Regulated |
| 11-51-0 | Monoammonium Phosphate | | Not Regulated |
| 18-46-0 | Diammonium Phosphate | | Not Regulated |
| 46-0-0 | Urea | | Not Regulated |
| 34-17-0 | Urea Ammonium Phosphate | | Not Regulated |
| 27-27-0 | Urea Ammonium Phosphate | | Not Regulated |
| 19-39-0 | Urea Ammonium Phosphate | | Not Regulated |
| 0-0-62 | Potassium Chloride (Potash) | | Not Regulated |
| 17-17-17 | Ammonium Nitrate Phosphate Potash | | Not Regulated |
| 28-0-0 | Urea/Ammonium Nitrate Solution | | Not Regulated |
| 18-35-0 | Ammonium Nitrate Phosphate | | Not Regulated |

Table 2: Common Chemicals (Regulated)

| Common Name | UN # | Shipping Name | Class | Packing Group |
|-------------|--------|-------------------------------|--------------|---------------|
| Gasoline | UN1203 | GASOLINE | 3 | II |
| Diesel Fuel | UN1202 | DIESEL FUEL | 3 | III |
| Ammonia | UN1005 | ANHYDROUS AMMONIA | 2.1 | |
| Propane | UN1978 | PROPANE | 2.1 | |
| LPG | UN1075 | LIQUEFIED PETROLEUM GASES | 2.1 | |
| Acetylene | UN1001 | ACETYLENE, DISSOLVED | 2.1 | |
| Oxygen | UN1072 | OXYGEN, COMPRESSED | 2.2 (5.1) | |
| 34-0-0 | UN2067 | AMMONIUM NITRATE FERTILIZERS* | 5.1 | III |
| 26-13-0 | UN2071 | AMMONIUM NITRATE FERTILIZERS | 9 | III |
| 23-24-0 | UN2071 | AMMONIUM NITRATE FERTILIZERS | 9 | III |

* Some manufacturers may classify their 34-0-0 as Ammonium Nitrate UN1942.

DANGEROUS GOODS SHIPPING DOCUMENT FOR ROAD TRANSPORT ON CANADIAN SHIPMENTS

| | | | | | | |
|--|-------------------------------------|-------------------------------------|--------------------------------|--|---------------|---------------------------------|
| CONSIGNOR | | | DESTINATION (City-Town) | | | |
| Name: | | | Name: | | | |
| Address: | | | Address: | | | |
| Name of Carrier | Prepaid <input type="checkbox"/> | Collect <input type="checkbox"/> | Transport Unit Number | | | |
| Point of Origin | | | Shipping Date | | Shipper's No. | |
| DANGEROUS GOODS | | | | | | |
| UN Number | Shipping Name | Primary Class | Subsidiary Class | Packing Group | Quantity | Packages Requiring Labels |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 24-Hour Number: _____ | | | | | | |
| ERAP Reference _____ and Telephone Number _____ | | | | | | |
| <p align="center">Consignor's Certification</p> <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 Transportation of Dangerous Goods Regulations.</p> <p align="center">Name of Consignor: _____</p> | | | | | | |
| Special Instructions | | | | | | |
| NON-REGULATED GOODS | | | | | | |
| Packages | Description of Articles | | | Weight | | |
| | | | | | | |
| | | | | | | |
| Received in apparent good order | | | | <div style="display: flex; justify-content: space-around;"> <div style="border-top: 1px solid black; width: 45%; text-align: center;">Consignee's Signature</div> <div style="border-top: 1px solid black; width: 45%; text-align: center;">Shipper's Signature</div> </div> | | |
| Received in Apparent Good Order | Driver's Signature | | | Driver's No. | | |

Please note that this sample shipping document contains some information that is not required in the TDG Regulations. The additional information reflects current industry practices.