

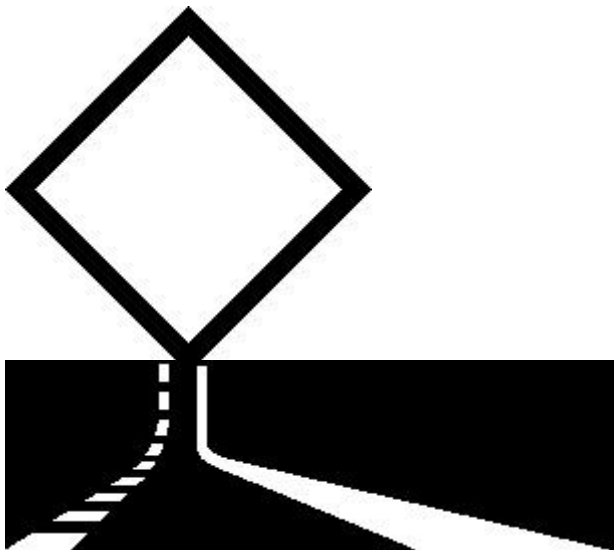
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**A Technical Publication
from the Co-ordination
and Information Centre**

DANGEROUS GOODS and the AGRICULTURAL INDUSTRY

November 2009

**Dangerous Goods
And Rail Safety**



**Government
of Alberta** ■
Transportation

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. The Coordination and Information Centre of Alberta Transportation can provide accurate information regarding the Regulations 24 hours a day.

Co-ordination and Information Centre

**Alberta Transportation
Dangerous Goods and Rail Safety Branch
Main Floor, Twin Atria Building
4999 – 98 Avenue
Edmonton, Alberta, T6B 2X3**

**Tel. Edmonton: (780) 422 – 9600
Tel. Province-wide: 1 (800) 272 – 9600
Fax: (780) 427 – 1044**

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 Compliance Officer responding to your call or contact the Manager of the CIC at 780-427-8660. *Legal Authority: Dangerous Goods Transportation and Handling Act, Section 13(1).*

INTRODUCTION

Dangerous Goods and Rail Safety Branch of Alberta Transportation is responsible for administering the Transportation of Dangerous Goods (TDG) legislation for dangerous goods transport by road in Alberta. The Dangerous Goods and Rail Safety Branch has a 24 hour, seven day Co-ordination and Information Centre (CIC) that can be reached at (780) 422-9600 in Edmonton or toll free 1-800-272-9600 for the remainder of Alberta.

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

CLASSIFICATION

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.

The job of classifying a product is the responsibility of manufacturers or importers of that product. Having classified a product, the manufacturer must also assign it a proper shipping name, a product identification 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

A shipping document is required for a dangerous goods shipment unless there is an exemption under the regulations. If documentation is needed then the supplier must provide the person transporting the dangerous goods with a shipping document. The supplier must also ensure that small containers of dangerous goods have proper safety marks. When you pick up a shipment of dangerous goods, the responsibilities of

classification, documentation and labeling will be handled by the supplier, who will indicate if placards are required.

If a shipping document is needed, specific information must be shown. The following is a list of the minimum information that must be shown in a shipping document.

Shipping Document Information	When Required	Where in The Regulations
Date	Always	3.5(1)(b)
Name and address of consignor	Always	3.5(1)(a)
Description of goods in the following order		3.5(1)(c)
a. Shipping name	Always	3.5(1)(c)(i)
b. The technical name of the most dangerous substance related to the primary classification	If Provision 16 of Schedule 2 applies	3.5(1)(c)(i)(A)
c. The words "Not Odorized"	For liquefied petroleum gas that has not been odorized	3.5(1)(c)(i)(B)
d. Primary classification	Always	3.5(1)(c)(ii)
e. Compatibility group	For Class 1	3.5(1)(c)(iii)
f. Subsidiary classifications	If Any	3.5(1)(c)(iv)
g. UN number	Always	3.5(1)(c)(v)
h. Packing group (none for compressed gases)	If Any	3.5(1)(c)(vi)
The quantity in the International System of Units (SI) ^{1,2}	Always	3.5(1)(d)
Net explosives quantity	For Class 1	3.5(1)(d)
The number of containers ²	For dangerous goods in small containers requiring safety labels	3.5(1)(e)

Shipping Document Information	When Required	Where in The Regulations
The words “24-Hour Number” followed by a telephone number where the consignor can be easily reached ³	Always	3.5(1)(f)
Emergency Response Assistance Plan (ERAP) number and telephone number to activate it	If Required	3.6(1)
The control and emergency temperatures	For products in Classes 4.1 and 5.2	3.6(3)



Note:

1. If the quantity of dangerous goods is less than 10% of the container’s capacity then the words “Residue – Last Contained” followed by the shipping name of the dangerous goods last contained in the means of containment may be used to describe the quantity. This does not apply to Class 2 gases in small containers and Class 7 radioactive substances [Section 3.5(4)].
2. If the quantity of dangerous goods or the number of small means of containment changes during transport, the carrier must show on the shipping document or on a document attached to the shipping document the change in the quantity of dangerous goods or the number of small containers [Section 3.5(5)].
3. A consignor can also use the telephone number of an agency that is competent to give the technical information on the shipment. For example, it is possible to use CANUTEC as a source of technical information provided that the consignor has received permission in writing from CANUTEC [Section 3.5(2)].

SAFETY MARKS

Small Means of Containment

Safety marks are the signs, labels and markings which are required by the TDG Regulations. The Regulations require that small means of containment (**450 l or less**) display the appropriate label for that particular class of dangerous good. A small container must display a dangerous goods label(s) for the primary and subsidiary hazard classes, the shipping name and the UN number of the product (Sections 4.10 to 4.12). The label is 100 mm on each side. If the container is too small or it has an irregular shape, the label can be reduced in size up to a dimension of 30 mm on each side [Section 4.7(2)].

Example of Safety Marks for a Small Container In this case the product is PROPANE, Class 2.1, UN1978	
 PROPANE	 UN 1978 PROPANE
Class 2.1 label is red with a small white flame	

Large Means of Containment

Placards representing the hazard class(es) of the dangerous goods being transported are placed on all four sides of a large means of containment (greater than 450 l) or transport units.


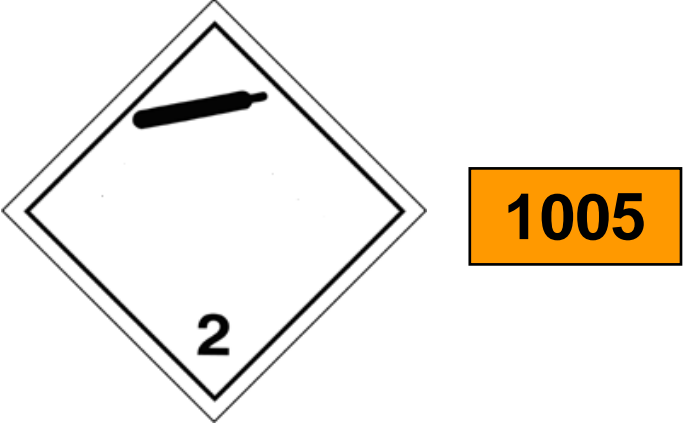
Each side of a placard must be at least 250 mm in length. Except for the DANGER placard, all placards have a line running 12.5 mm inside the edge. If the large means of containment has an irregular shape or its size is too small, the placard can be reduced in size but the dimensions must never be less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

Placards and UN numbers must be displayed in accordance with the table in Section 4.15 of the TDG Regulations if:

- the dangerous goods are in a quantity or concentration for which an Emergency Response Assistance Plan is required;
- the dangerous goods are included in Class 7, Radioactive Materials, for which a Category III Yellow Label is required;
- the dangerous goods are a liquid or a gas in direct contact with the large means of containment;
- the dangerous goods have a total gross mass greater than 500 kg; or
- are included in Class 1.1, 1.2, 1.3 or 1.5 and are
 - (i) not subject to special provision 85 or 86 and exceed 10 kg net explosives quantity, or
 - (ii) subject to special provision 85 or 86 and the number of articles exceeds 1000.

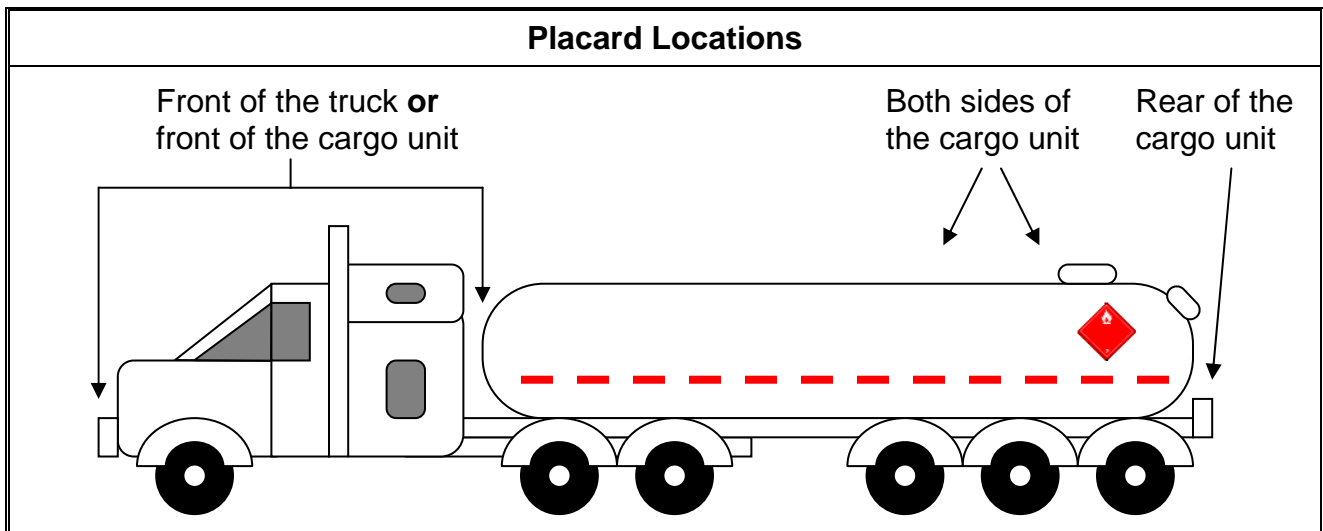
The UN number of the dangerous goods being transported must be displayed inside the placard or on an orange panel next to the placard (Section 4.15). The letters “UN” are always omitted [Section 4.8(2)].

Example of Safety Marks for a Large Means of Containment
In this case the product is
ANHYDROUS AMMONIA, Class 2.3(8), UN1005

	
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UN1005 placards are specifically for this product only, they may not be used for other Class 2.3 products

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



TRAINING

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

A person is adequately trained if the person has sound knowledge of the topics listed below that relate directly to the person's duties (Section 6.2):

- classification of dangerous goods, shipping names, UN numbers, packing groups,
- shipping documentation,
- safety marks,
- certification safety marks, safety requirements and safety standards,
- emergency response assistance plan requirements,
- reporting requirements,
- safe handling and transportation practices,
- proper use of equipment, and
- emergency measures to take in case of releases.

The employer issues a training certificate when they have reasonable grounds to believe that an employee possesses adequate training. A training certificate must have the following information (Section 6.3):

- the name and address of the employer,
- the name of the employee,
- the date when the training certificate expires, 36 months 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 that the employee has received and a copy of their training certificate (Section 6.6). The training certificate must be immediately presented to an inspector who requests it (Section 6.8).

EMERGENCY RESPONSE ASSISTANCE PLANS

An Emergency Response Assistance Plan (ERAP) is required in instances where dangerous goods are potentially very hazardous when transported in moderate or large quantities. For this reason Part 7 of the TDG Regulations requires consignors and importers of dangerous goods to register an ERAP if necessary.

An ERAP is necessary whenever the amount of dangerous goods being transported exceeds the container limits described in Column 7 of Schedule 1 of the TDG Regulations (Section 7.1). In many instances dangerous goods do not require an ERAP; however, consignors and importers of dangerous goods must make sure that the quantities of dangerous goods in a consignment do not exceed the ERAP quantity limits. For example, a consignment of anhydrous ammonia shipped in a tank with a capacity of 3000 l requires an ERAP, but anhydrous ammonia shipped in a tank with a capacity of 2000 l does not.

If you are not sure whether a consignment of dangerous goods requires an ERAP, you may call the Coordination and Information Centre. You can obtain information on ERAPs at this web site: <http://www.tc.gc.ca/tdg/erap/menu.htm>.

THE REPORTING OF SPILLS

In case of an accidental release or an imminent accidental release of dangerous goods, the person who has possession of the dangerous goods must report immediately. An immediate report is required when the quantities of dangerous goods released exceed the amounts set out in the following table (Section 8.1) or for any imminent accidental release of dangerous goods. For more information on reporting requirements, request the CIC information bulletin entitled Reporting an Accidental Release of Dangerous Goods.

Class	Quantity
1	Any quantity that: a) could pose a danger to public safety or 50 kg; or b) is included in Class 1.1, 1.2, 1.3 or 1.5 and is: i) not subject to special provision 85 or 86 but exceeds 10 kg net explosives quantity; or ii) subject to special provision 85 or 86 and the number of articles exceeds 1000.
2	Any quantity that could pose a danger to public safety or any sustained release of 10 minutes or more
3	200 l
4	25 kg
5.1	50 kg or 50 l
5.2	1 kg or 1 l
6.1	5 kg or 5 l
6.2	Any quantity
7	Any quantity that could pose a danger to public safety; or an emission level greater than the level established in section 20 of the <i>Packaging and Transport of Nuclear Substances Regulations</i> .
8	5 kg or 5 l
9	25 kg or 25 l

In Alberta, the report must be made to:

- the local police,
- Alberta Transportation, Dangerous Goods & Rail Safety Branch at 1-800-272-9600,
- the person's employer,
- the consignor of the dangerous goods,
- the owner, lessee or charterer of the road vehicle involved, and
- CANUTEC at (613)996-6666 when the dangerous goods are in Class 1, Class 6.2 or there was an accidental release from a cylinder that suffered a catastrophic failure.

The information that must be included in the report is:

- the shipping name or UN number of the dangerous goods,
- the quantity of dangerous goods initially loaded into the container,
- the quantity of dangerous goods released,
- a description of the condition of the container and the details of the conditions of transport when the release occurred,
- a description of the circumstances that led to a catastrophic failure of a cylinder, if involved in the release,
- the location of the accidental release,
- the number of injuries or deaths, if any occurred,
- an estimate of the number of people evacuated as a result of the accidental release.

A report can also include other information not required by the regulations; for example, any cleanup arrangements, involvement of other emergency response agencies like the police, fire department, Alberta Environment, etc.

After submitting an immediate report, the employer of the person who made the immediate report must submit a 30-day Follow-up Report to the Dangerous Goods Directorate of Transport Canada (Section 8.3). The 30-Day Follow-up Report must have the following information:

- name, address and telephone number of the place of business of the person submitting the report,
- date, time and location of the accidental release,
- name and address of the place of business of the consignor,
- classification of the dangerous goods,
- estimate of the quantity loaded into the containers before the accidental release and the quantity of dangerous goods released,
- a description of the means of containment involved and a description of the failure or damage including how the release occurred,
- if a catastrophic failure of a cylinder occurred, the cylinder certification markings and a description of the failure,
- number of deaths and injuries resulting from the accidental release,
- an estimate of the number of people evacuated, if any, and
- if an ERAP was activated, the name of the person who responded.

EXEMPTIONS

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

150 kg Gross Mass Exemption (Section 1.15)

Part 3 (Documentation), Part 4 (Dangerous Goods Safety Marks), Part 5 (Means of Containment), Part 6 (Training) and Part 8 (Accidental Release and Imminent Accidental Release Report Requirements) of the Regulations do not apply to the handling, offering for transport or transporting of dangerous goods if

- a. the dangerous goods (not included in Class 2, Gases), are contained in one or more means of containment each of which has a gross mass less than or equal to 30 kg and is designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of dangerous goods that could endanger public safety;
- b. for dangerous goods included in Class 2 may be in one or more small means of containment and must comply with Part 5 (Means of Containment);
- c. The gross mass of all dangerous goods
 - i) transported on the road vehicle or the railway vehicle is less than or equal to 150 kg, and
 - ii) transported on the ship on a domestic voyage is less than or equal to 150 kg, excluding dangerous goods in a road vehicle or railway vehicle being transported on the ship.

This exemption applies only to the explosives listed below:

- (i) UN numbers UN0044, UN0105, UN0131, UN0161, UN0173, UN0186, UN0191, UN0197, UN0276, UN0312, UN0323, UN0335 if classified as a consumer firework, UN0336, UN0337, UN0351, UN0373, UN0404, UN0405, UN0431, UN0432, UN0454 and UN0499, and
- (ii) UN numbers UN0012, UN0014 and UN0055 if the cartridges are for shotguns or, in the case of cartridges for rifles or pistols, the caliber is less than 12.7 mm (50 calibre).

The above exemption does not apply to dangerous goods that

- (i) are in a quantity or concentration that requires an emergency response assistance plan,
- (ii) require a control or emergency temperature,

- (iii) are included in Class 2.1 in a cylinder with a capacity greater than 46 L or Class 2.3 in any capacity cylinder,
- (iv) are included in Class 4 (PG I),
- (v) are included in Class 5.2 (may only be transported as a Limited Quantity if applicable),
- (vi) are included in Class 6.1 (PG I) or Class 6.2,
- (vii) are included in Class 7 (and must be licensed by the Canadian Nuclear Safety Commission).

500 Kg Gross Mass Exemption (Section 1.16)

Part 3 (Documentation), Part 4 (Dangerous Goods Safety Marks) and Part 5 (Means of Containment) of the Regulations do not apply to the handling, offering for transport or transporting of dangerous goods if

- a. for dangerous goods included in Class 2, may be in one or more small means of containment that comply with Part 5 (Means of Containment);
- b. the dangerous goods, other than Class 2, are contained in one or more means of containment, each of which has a gross mass less than or equal to 30 kg;
- c. any drums containing dangerous goods must meet the requirements of section 5.12 of Part 5 (Means of Containment)
- d. the dangerous goods are accompanied by a shipping document that, is located in accordance with sections 3.7 to 3.9 of Part 3, Documentation. The shipping document includes the following information in the following order:
 - i. the primary class of the dangerous goods in each means of containment following the word "Class",
 - ii. the 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" and

For example, Class 3, number of means of containment, 10

- c. each means of containment has displayed on one side, other than the side on which it is intended to rest or to be stacked during transport,
 - i. the dangerous goods safety marks required by Part 4, Dangerous Goods Safety Marks, and
 - ii. if either the "Pest Control Products Act" or the "Hazardous Products Act" are applicable, the marks required by these Acts must be visible
- d. the person transporting the dangerous goods is trained in accordance with Part 6, Training.

This exemption does not apply to dangerous goods that:

- i) are in a quantity or concentration that requires an emergency response assistance plan
- ii) require a control or emergency temperature
- iii) are included in Class 1, Explosives, except for explosives included in Class 1.4S and the UN numbers UN0191, UN0197, UN0276, UN0312, UN0336, UN0403, UN0431, UN0453 and UN0493
- iv) Are included in Class 2.1 in a cylinder with a capacity greater than 46 L or Class 2.3 in any capacity cylinder
- v) Are included in Class 4 (PG I)
- vi) Are included in Class 5.2 (may only be transported as a Limited Quantity if applicable)
- vii) Are included in Class 6.1 (PG I) or Class 6.2
- viii) are included in Class 7 (and must be licensed by the Canadian Nuclear Safety Commission).

Limited Quantities Exemption (Section 1.17)

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

1. the consignment is contained in a means of containment that has a gross mass less than or equal to 30 kg;
2. the means of containment 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; and
3. the dangerous goods
 - a. if a solid, have a mass that is less than or equal to the number shown for them in column 6 of Schedule 1 when that number is expressed in kilograms,
 - b. if a liquid, have a volume that is less than or equal to the number shown for them in column 6 of Schedule 1 when that number is expressed in litres, or
 - c. if a gas, including a gas in a liquefied form, are contained in a means of containment that has a capacity less than or equal to the number shown for them in column 6 of Schedule 1 when that number is expressed in litres.

Part 3 (Documentation), Part 4 (Dangerous Goods Safety marks), Part 5 (Means of Containment), Part 6 (Training), Part 7 (Emergency Response Assistance Plan) and Part 8 (Accidental Release and Imminent Accidental Release Report Requirements) of the TDG Regulations do not apply to a limited quantity of dangerous goods in transport on a road vehicle if the means of containment is marked on one side, other than the side on which it is intended to rest or to be stacked, with the words "**Limited Quantity**" or the abbreviation "**Ltd. Qty.**" or the words "**Consumer Commodity**" and the words are legible and displayed against a contrasting background.

When a limited quantity of dangerous goods is in a means of containment that is inside another means of containment, the 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 and the outer means of containment is not intended to be opened during transport. The outer means of containment must be marked on one side, other than the side on which it is intended to rest or to be stacked, with the words "**Limited Quantity**" or the abbreviation "**Ltd. Qty.**" or the words "**Consumer Commodity**" and the words are legible and displayed against a contrasting background.

Instead of marking the limited quantity of dangerous goods legibly and visibly on a contrasting background with the words "Limited Quantity", the abbreviation "Ltd. Qty." or the words "Consumer Commodity", the means of containment may have displayed on it the UN numbers of the limited quantities of dangerous goods preceded by the letters "UN" placed within a diamond-shaped mark. The line forming the diamond-shaped mark must be black with a width of at least 2 mm. If the dangerous goods have different UN numbers, then the mark must be large enough to include each UN number. Each side must not be less than 50 mm. The UN numbers and letters must be at least 6 mm high. The line, UN numbers and letters must be on a contrasting background.

When the gross mass of an accumulation of limited quantities of dangerous goods offered for transport by one consignor to one destination is greater than 500 kg, the consignor must give to the carrier a document that includes the words "Limited Quantity", the abbreviation "Ltd. Qty." or the words "Consumer Commodity". The reporting requirements in Part 8, Accidental Release and Imminent Accidental Release Report Requirements, must be complied with.

Class 3, Flammable Liquids: General Exemption (Section 1.33)

Part 3 (Documentation), Part 4 (Dangerous Goods Safety Marks), Part 5 (Means of Containment), Part 6 (Training), Part 7 (Emergency Response Assistance Plan), Part 9 (Road) and Part 10 (Rail) of the TDG Regulations do not apply to dangerous goods in Class 3, Flammable Liquids, if the dangerous goods:

- have no subsidiary classification,
- have a flash point above 37.8 °C and Packing Group III, and
- are contained in one or more small containers (450 L or less) that are designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport there will be no accidental release of the dangerous goods.

This exemption is applicable to diesel but **not** to gasoline.

UN1202, DIESEL FUEL, or UN1203, GASOLINE, Exemption (Section 1.35)

You do not require a dangerous goods shipping document or dangerous goods training certificate when gasoline or diesel is transported by road, in one or more containers if:

- the total capacity of all the containers is not more than 2000 liters;
- each of the containers displays the label or placard required in Part 4 of the TDG Regulations (the UN number is not required on a placard);
- each container is secured to the road vehicle so that the label or at least one placard displayed on each one is visible from outside the vehicle.

A practical application of this exemption is with respect to tidy tanks in the rear of pickup trucks. If the tank has a capacity between 450 liters and 2000 liters then the only requirement is to have at least one flammable liquid placard (Class 3) attached to the tank on the visible side.

Containers of gasoline with a volume of 450 liters or less are considered small containers and need to display the proper label (Class 3). Diesel fuel in containers with a capacity of 450 liters or less is not regulated.

Class 2, Gases, in Small Means of Containment Exemption (Section 1.32.3)

Several gases used for welding and related purposes are exempt from documentation and dangerous goods training requirements of the TDG Regulations when being transported by road. Provided the requirements listed below are followed, the operator does not require a dangerous goods shipping document or a dangerous goods training certificate if:

- the total quantity is less than or equal to 500 kg gross mass,
- the dangerous goods are contained in not more than 5 cylinders, and
- the labels are visible from the outside of the vehicle.

This exemption applies only to:

- UN 1001, ACETYLENE, DISSOLVED;
- UN 1002, AIR, COMPRESSED;
- UN 1006, ARGON, COMPRESSED;
- UN 1013, CARBON DIOXIDE;
- UN 1060, METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED;
- UN 1066, NITROGEN, COMPRESSED;
- UN 1072, OXYGEN, COMPRESSED; or
- UN 1978, PROPANE

More than 500 kg in more than five containers/cylinders of the above gases and all other gases are subject to the full TDG Regulations.

Agriculture: 1500 kg Gross Mass Farm Vehicle Exemption (Section 1.21)

Part 3 (Documentation), Part 4 (Dangerous Goods Safety Marks), Part 5 (Means of Containment) and Part 6 (Training) of the TDG Regulations do not apply to dangerous goods in a quantity less than or equal to 1500 kg gross mass in transport on a road vehicle licensed as a farm vehicle if:

- a. the dangerous goods are transported solely on land and the distance on public roads is less than or equal to 100 km,
- b. dangerous goods included in Class 2, Gases, are in one or more means of containment in compliance with Part 5 (Means of Containment),
- c. the dangerous goods not included in Class 2 are in one or more means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport there will be no accidental release of the dangerous goods,
- d. the gross mass of all dangerous goods on the vehicle is less than or equal to 1500 kg,
- e. the dangerous goods will be used or have been used by a farmer for farming purposes, and
- f. the dangerous goods do not include:
 - i. Class 1, Explosives (except for explosives in Class 1.4S),
 - ii. Class 2.1, Flammable Gases, in a cylinder with a capacity greater than 46 l,
 - iii. Class 2.3, Toxic Gases,
 - iv. Class 6.2, Infectious Substances, or
 - v. Class 7, Radioactive Materials.

If an emergency response assistance plan is required, the dangerous goods must be accompanied by a shipping document.

Agriculture: 3000 kg Gross Mass Farm Retail Exemption (Section 1.22)

Part 3 (Documentation), Part 4 (Dangerous Goods Safety Marks) and Part 5 (Means of Containment) of the TDG Regulations do not apply to dangerous goods in a quantity less than or equal to 3000 kg gross mass in transport on a road vehicle if:

- a. the dangerous goods are transported only on land between a retail place of purchase and the place of destination and the distance on public roads is less than or equal to 100 km;
- b. dangerous goods included in Class 2, Gases, are in one or more means of containment in compliance with Part 5 (Means of Containment),
- c. the dangerous goods not included in Class 2 are in one or more means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport there will be no accidental release of the dangerous goods,
- d. the gross mass of all dangerous goods on the vehicle is less than or equal to 3000 kg,
- e. the dangerous goods will be used or have been used by a farmer for farming purposes;
- f. the dangerous goods do not include:
 - i. Explosives (except for explosives in Class 1.4S),
 - ii. Class 2.1, Flammable Gases, in a cylinder with water capacity greater than 46 l,
 - iii. Class 2.3, Toxic Gases,
 - iv. Class 6.2, Infectious Substances, or
 - v. Class 7, Radioactive Materials.

Ammonium Nitrate Fertilizer Solutions or Mixtures
(Schedule 2, Special Provision 37)

If you are transporting ammonium nitrate or an ammonium nitrate fertilizer or mixture by road, you will not need a dangerous goods shipping document, dangerous goods safety marks, or dangerous goods training if the following conditions are met:

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

This special provision applies to UN1942, and UN2067 to UN2072.

Miscellaneous Special Cases: Ammoniating Fertilizer Solutions (Section 1.46(a))

The TDG Regulations do not apply to ammoniating fertilizer solutions with an absolute pressure of ammonia less than or equal to 276 kPa at 41 °C. The dealer will know which products sold fit into this category.

Agriculture: Anhydrous Ammonia Exemption (Section 1.24)

Anhydrous ammonia (AMMONIA, ANHYDROUS, UN 1005), is classified as a compressed gas (primary class 2.3) and a corrosive substance (subsidiary class 8). If you are transporting anhydrous ammonia by road in a field application tank (e.g., a Nurse Tank) with a capacity of 10,000 litres or less and the distance on public roads is 100 km or less, then you do not need a shipping document or an Emergency Response Assistance Plan. You will need safety marks (UN1005 placards) for the tank and the driver must have a dangerous goods training certificate.

Agriculture: Pesticide Exemption (Section 1.23)

Regulated herbicides are often classified as Class 6.1 poisonous substances due to their toxicity. Containers or packages of regulated herbicides must have a shipping name, UN number and a label. A dangerous goods shipping document is required and must accompany the shipment. Placards are needed when the load is more than 500 kg (1100 lbs). The label or placard for products in Class 6.1, Packing Group III is a white diamond with a skull-and-crossbones in it with a numeral "6" in the toe of the diamond.

Regulated Pesticides may be classified as Class 3 flammable liquids because of the solvents that are used as carriers for the active ingredients. In this case the label or placard would be a red diamond with a white flame in it. There would be a numeral "3" in the toe of the diamond. Containers would have to display the shipping name, UN number and label. A dangerous goods shipping document is required and must accompany the shipment. Placards are needed when the load is more than 500 kg (1100 lbs).

Check with your bulk dealer or manufacturer for the classification of any product you use. You should find out the classification for both the concentrated form of a product and the diluted product. If you transport the product in a diluted form it may not be regulated under Section 1.23 of the TDG Regulations described below:

You do not require documentation, a UN number or training if you are transporting a solution of pesticide by road for a distance less than or equal to 100 km if:

- the product or solution is transported in a tank that has a capacity of 6000 l or less;
- the tank is used to prepare the dangerous goods for application or to apply dangerous goods;

- the tank has the required placards on all four sides (it does not require the UN number to be displayed); and
- only one large means of containment (capacity greater than 450 l) containing the solution of pesticides is in transport on the road vehicle.

If an Emergency Response Assistance Plan is required for the amount of product being transported, then the dangerous goods must be accompanied by a dangerous goods shipping document.

Miscellaneous Special Cases: Soya Bean Meal [Section 1.46(o)]

Solvent extracted soya bean meal which is free of flammable solvent and contains 1.5% or less oil and 11.0% or less moisture is exempt from the TDG Regulations.

Spraying by Aircraft (Section 12.12)

A person may handle, offer for transport or transport dangerous goods by aircraft for the purposes of aerial agricultural work if:

- The dangerous goods are in a tank, a container or an apparatus that is an integral part of the aircraft or that is attached to the aircraft in accordance with the Certificate of Airworthiness issued under the “Canadian Aviation Regulations”.
- The air carrier ensures that 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 Part 6, Training, of the TDG Regulations and Chapter 4, Training, of Part 1, General, of the ICAO Technical Instructions.
- The air carrier complies with Part 8, Accidental Release and Imminent Accidental Release Report Requirements, of the TDG Regulations.
- If the pilot-in-command does not load or supervise the loading of the dangerous goods, the person who loads and secures the dangerous goods gives 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 and each area or compartment of the aircraft containing dangerous goods is ventilated to prevent accumulation of vapour.
- When an in-flight emergency occurs and circumstances permit, the pilot-in-command complies 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. The person 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	Mono-Ammonium Phosphate		Not Regulated
18-46-0	Di-Ammonium 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	Shipping Name	UN #	Class	Packing Group
Gasoline	GASOLINE	UN 1203	3	II
Diesel Fuel	FUEL OIL	UN 1202	3	III
Ammonia	ANHYDROUS AMMONIA	UN 1005	2.3 (8)	
Propane	PROPANE	UN 1978	2.1	
LPG	LIQUEFIED PETROLEUM GASES	UN 1075	2.1	
Acetylene	ACETYLENE, DISSOLVED	UN 1001	2.1	
Oxygen	OXYGEN, COMPRESSED	UN 1072	2.2 (5.1)	
34-0-0	AMMONIUM NITRATE FERTILIZERS*	UN 2067	5.1	III
26-13-0	AMMONIUM NITRATE FERTILIZERS	UN 2071	9	III
23-24-0	AMMONIUM NITRATE FERTILIZERS	UN 2071	9	III

* Some manufacturers may classify their 34-0-0 as Ammonium nitrate UN 1942.

DANGEROUS GOODS SHIPPING DOCUMENT FOR ROAD TRANSPORT

DESTINATION (City-Town) Name: Address:			CONSIGNOR Name: Address:			
Name of Carrier		Prepaid <input type="checkbox"/>	Collect <input type="checkbox"/>	Transport Unit Number		
Point of Origin			Shipping Date		Shipper's No.	
REGULATED DANGEROUS GOODS			24-Hour Number: ERAP Reference _____ and Telephone Number _____			
Shipping Name	Primary Class	Subsidiary Class	UN Number	Packing Group	Quantity	Packages Requiring Labels
This is to certify that the above named articles are properly classified, described, packaged, marked and labelled and are in proper condition for transportation according to the <i>Transportation of Dangerous Goods Regulations</i> .						
Special Instructions						
NON-REGULATED GOODS						
Packages	Description of Articles				Weight	
Received in apparent good order			_____ Consignee Signature		_____ Shipper's Signature	
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.