

Receiving and Shipping Dangerous Goods

A Guide to the Transportation of Dangerous Goods Regulations for Photo Processors and Digital Imagers



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Understanding Transportation of Dangerous Goods

Each day, photo processing chemicals and inkjet inks that are considered dangerous goods are shipped into, across and out of Canada. These dangerous goods are substances that have the potential to cause personal injury and damage to the environment and property *if* they are not handled properly.

In Canada, the federal government and each of the provinces and territories have enacted legislation to regulate the transportation of dangerous goods. Additionally, each province has adopted the *Transportation of Dangerous Goods (TDG) Regulations* made under the federal Transportation of Dangerous Goods Act, 1992.

TDG regulations apply to any photo processor or digital imager that handles, offers for transport or transports dangerous goods. The term *handling* means loading, unloading, packing or unpacking dangerous goods in a container, before, during or after transport. Handling also includes storing goods in the course of transportation. Therefore, any facility that uses, receives or ships dangerous goods must comply with the TDG regulations.

Exemption for Personal Use
These regulations do not apply to dangerous goods that are for personal use (meaning not work-related).

Training is an essential component of TDG. Without training, workers are not able to package, label and document a shipment properly. Without proper documentation and placarding of loads, an accident caused by improper packaging may escalate into a serious incident for responders and could endanger public safety.

What are Dangerous Goods?

The Transportation of Dangerous Goods (TDG) Act includes nine classes of hazards, with specific criteria for each class. If a material meets the criteria for any of the nine classes, that material is considered to be a dangerous good. We'll examine each of the nine classes in the next section.

Examples of Photo Processing Chemicals that May be Dangerous Goods

- *Parts of the film and paper developer and replenisher solutions*
- *Color film bleach*
- *Color paper bleach fix*

Dangerous goods are dangerous whether or not they are in transport. The special precautions outlined in this booklet are regulatory requirements designed to ensure the safe transportation of dangerous goods.

Three different groups of people are involved in transporting dangerous goods: shipper, transporter (carrier) and receiver. Each party shares part of the responsibility for safe and proper shipping.

The Shipper's Responsibilities

The shipper, also called the consignor, can be your supplier, who ships chemicals and inks to you. If you reship dangerous goods to other photolabs (whether by employee car or courier), you become the shipper.

The shipper of the dangerous goods bears the greatest responsibility under the TDG regulations for ensuring the safety of the goods. The shipper is responsible for the following:

- Determining the hazardous properties of the goods
- Classifying the goods based on their hazard(s)
- Labeling and marking the containers
- Choosing and using proper containers
- Preparing a proper shipping document
- Reporting spills
- Training employees who handle dangerous goods



If you are reshipping goods, you can generally rely on the work the manufacturer has already done. Your primary role will be to prepare a proper shipping document and ensure your shipping/receiving employees are trained.

The Transporter's Responsibilities

When the transporter (carrier) takes possession of the dangerous goods, they are assuming responsibility for the materials. The transporter may be the company that delivers chemicals and inks to your photo lab. Also, if you transport dangerous goods to other photolabs (in an employee-owned or company-owned vehicle), your facility becomes the transporter.

Under the TDG regulations, the transporter is responsible for the following:

- Ensuring the goods have been properly marked
- Ensuring the shipping document is correct
- Reporting spills
- Training employees who handle dangerous goods



The Receiver's Responsibilities

The receiver has the least control over the movements of the dangerous goods and therefore, bears the least responsibility for the safety of the shipment. The receiver is responsible for the following:

- Ensuring the dangerous goods are accompanied by a proper shipping document.
- Reporting spills
- Training employees who handle dangerous goods

Training Requirements for Photo Processors and Digital Imagers

The training requirements for TDG require that a person who handles dangerous goods have sound knowledge of TDG topics that relate directly to the person's duties. For photo processors who are simply receiving dangerous goods, these TDG topics include the following:

- Knowing the classes of dangerous goods
- Understanding the information on the shipping document
- Recognizing the dangerous goods safety marks
- Knowing when and how to report a chemical spill or release

Two other requirements — learning safe handling practices and spill/release response procedures — should be addressed under your company's WHMIS (Workplace Hazardous Materials Information System) program. The Photo Marketing Association has a complete WHMIS program that is designed for photo processors and digital imagers. To order a copy of the WHMIS program, call PMA (Canada) at 800/461-4350.

IMPORTANT NOTE

As you read through this workbook, keep in mind that much of the information that's required for transporting dangerous goods is for the benefit of the emergency responder. In the event of a spill or release of a dangerous good, the emergency responder must have thorough information about the materials for his/her own protection, as well as that of the environment, the surrounding people and neighborhoods, and property.

Class 1 - Explosives

Class 1 Explosives are substances that are capable of undergoing a chemical reaction that produces gas at a temperature, pressure and speed that would damage the surroundings OR are designed to produce an explosive or pyrotechnic effect. **Class 1 dangerous goods are not expected to be found in photo processing and digital imaging facilities.**



- Class 1.1** Mass explosion hazard (e.g., TNT, black gunpowder)
- Class 1.2** Projection hazard (e.g., mines, grenades)
- Class 1.3** Fire hazard along with either a minor blast hazard or a minor projection hazard or both (e.g., fireworks, flares)



Class 1.4
No significant hazard (e.g., safety cartridges, model rocket engines)



Class 1.5
Very insensitive substance with a mass explosion hazard (e.g., blasting caps)



Class 1.6
Extremely insensitive articles with no mass explosion hazard

Class 2 - Gases

Class 2 Gases are substances that are gaseous, a mixture of gases, an article charged with a gas, or an aerosol. **Some large photo processing and digital imaging facilities may have compressed gasses.**



Class 2.1
Flammable gas (e.g., propane) (The label and placard have a red background.)



Class 2.2
Non-flammable gas and non-toxic gas (e.g., compressed air) (The label and placard have a green background.)



Class 2.3
Toxic gas (e.g., sulphur dioxide, anhydrous ammonia) (The label and placard have a white background.)



Class 2.3
Oxidizing Gas

Class 3 - Flammable Liquids

Class 3, Flammable liquids are substances that have a flashpoint less than or equal to 60.5°C or that will be at a temperature that is greater than or equal to their flashpoint during transportation. You can find the flashpoint of a substance by looking at its material safety data sheet **Some film cleaners and solvent inkjet inks may be class 3 dangerous goods.**



Class 3

Class 4 - Flammable Solids

Class 4 Flammable solids are substances liable to spontaneous combustion or substances that on contact with water emit flammable gases (e.g., water-reactive substances). **Class 4 dangerous goods are not expected to be found in photo processing and digital imaging facilities.**



Class 4.1
Readily combustible under normal conditions of transport via friction (e.g., nitrocellulose).



Class 4.2
Spontaneously ignites within 5 minutes after coming into contact with air, liable to spontaneous heating to the point where it ignites (e.g., diethyl zinc).



Class 4.3
On contact with water, emits dangerous quantities of flammable gases or spontaneously ignites with water or water vapor (e.g., sodium).

Class 5 - Oxidizing Substances and Organic Peroxides

Class 5 Oxidizing substances and organic peroxides are substances that yield oxygen or that are unstable in fire and impact. **Class 5 dangerous goods are not expected to be found in photo processing and digital imaging facilities.**



Class 5.1
Causes or contributes to the combustion of other material by yielding oxygen or other oxidizing substances (e.g., oxygen, chlorine, ammonium nitrate).



Class 5.2
May be liable to explosive decomposition, be sensitive to heat, shock, or friction, or react dangerously with other dangerous goods.

Class 6 - Toxic and Infectious Substances

Class 6 Toxic and infectious substances are substances that are extremely toxic if swallowed, inhaled or contacted by skin OR are infectious. **Class 6 dangerous goods are not expected to be found in photo processing and digital imaging facilities.**



Class 6.1
Poisonous through inhalation of its vapors, by skin contact or by ingestion (e.g., methylene chloride)



Class 6.2 (label)
Hazardous to animals, humans or both (e.g., rabies, materials contaminated with blood from first-aid clean-up).

Class 7 - Radioactive Materials

Class 7 Radioactive materials are substances that are described in the Atomic Energy Control Act. There are no divisions for Class 7. **Class 7 dangerous goods are not expected to be found in photo processing and digital imaging facilities.**



Class 7

Class 8 - Corrosives

Class 8 Corrosives are substances that destroy living tissue on contact or have a corrosion rate greater than 6.25 mm per year at 55°C (e.g., battery acid, sulfuric acid, industrial cleaners, sodium hydroxide). There are no divisions for Class 8. **Many of the photo processing chemicals may be class 8 dangerous goods.**



Class 8

Class 9 - Miscellaneous Products, Substances or Organisms

Class 9 Miscellaneous products, substances or organisms are substances that are dangerous goods even though they do not meet the criteria for inclusion in Classes 1 to 8. (The labels and placards have a black and white striped top half and a white lower half.) There are no divisions for Class 9.

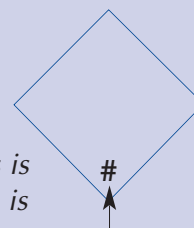


Class 9

Many years ago, silver-bearing solutions were classified as class 9 materials. However, the TDG regulations delisted silver in 1995. **Class 9 dangerous goods are not typically found in photo processing and digital imaging facilities.**

Identifying a Dangerous Good

You can tell which hazard class the manufacturer has identified by looking at which of the TDG hazard diamond labels is on the container. The number of the class is indicated at the bottom of each label.



Subsidiary Class

Some materials have more than one hazard associated with them. For example, a material may be both corrosive (class 8) and a flammable liquid (class 3). In these cases, the manufacturer would consult the regulations to determine which class is the primary and which is the subsidiary (secondary). Using class 8 and class 3 as examples, the regulations indicate that class 8 is the primary hazard and class 3 is the subsidiary hazard. The following example shows how the subsidiary class appears in the TDG classification.

Common name: Glacial acetic acid
TDG classification: Acetic acid solution, **class 8 (3)**, UN2789, PGII
1. 2.

The two parts of a hazard class are:

1. Primary hazard class
2. Subsidiary hazard class (in parenthesis)

UN Number

The UN (United Nations) number is a 4-digit number used to identify a material. This numbering system is used in many countries to describe a dangerous good, including Canada and the U.S. The TDG regulations contain schedules or lists of UN numbers. There are very specific rules the manufacturers must follow to ensure they choose the UN number that represents the material properly. **If you reship dangerous goods, you can rely on the UN number identified by the manufacturer.** You can find the UN number on the bill of lading and on the shipping container for a dangerous good.

Typical UN Numbers Used with Photo Processing Chemicals and Inkjet Inks Dangerous Goods

- UN3265 Color paper developer, part B
- UN1814 Color paper developer, part C
- UN1760 Color paper bleach-fix
- UN1993 Solvent inkjet inks

The following example shows how the UN number appears within the TDG classification.

Common name: Color film developer replenisher, part C
TDG classification: Potassium hydroxide, solution, class 8, **UN1814**, PGII

The UN number in this TDG classification is UN1814.

Packing Group

Packing group (PG) is an odd term used to indicate the level of hazard associated with a substance. The packing group is either a 1, 2, or 3, and is shown as PGI, II or III. PGI represents the greatest risk of danger, and PGIII represents the least. For example, a corrosive liquid is given a PGI, PGII or PGIII depending upon how quickly it can destroy skin tissue or metal, upon contact.

Following are some criteria for packing groups of corrosive materials, when the material is in continuous contact with human tissue:

PGI	Destroys skin tissue in less than three minutes
PGII	Destroys skin tissue in more than three but less than 60 minutes
PGIII	Destroys skin tissue in more than 60 minutes but less than 4 hours

Photo processing solutions that are class 8 (corrosive) dangerous goods are typically either PGII or PGIII.

The following example shows how the packing group appears as the last piece of information in a proper TDG classification.

Common name: Color film developer replenisher, part C
TDG classification: Potassium hydroxide, solution, class 8, UN1814, **PGII**

The packing group in this TDG classification is II, written as PGII.

Summary

TDG classification is typically undertaken by the manufacturer. While you may never actually have to classify dangerous goods, it's important that you understand the information that's contained in a TDG classification. There are four critical pieces of information:

- 1) Shipping name
- 2) Hazard class
- 3) UN number
- 4) Packing group

Keeping in mind that the TDG regulations are designed to provide safe transportation will help you understand the importance of properly classifying dangerous goods.

Test your understanding of this section by answering the review questions on the next page.

Review 1: Classifying Dangerous Goods

Choose the best answer to each of the following questions.



1. Who has the most responsibility, when it comes to dangerous goods?
 - A. Shipper
 - B. Transporter
 - C. Receiver
 - D. All parties share equal responsibility
2. How many classes of dangerous goods are there?
 - A. 6
 - B. 3
 - C. 8
 - D. 9
3. The classes of dangerous goods that are most applicable to photo processors and digital imagers are:
 - A. 3, 8
 - B. 1, 9
 - C. 8, 9
 - D. 4, 5
4. Color paper developer and replenisher is a proper TDG shipping name.
True or False
5. What does this symbol mean?
 - A. Flammable
 - B. Corrosive
 - C. Miscellaneous
 - D. Compressed gas
6. Packing group refers to a material's level of hazard.
True or False



Shipping Document

Every shipment of photo processing chemicals and inkjet inks that are classified as dangerous goods must be accompanied by written shipping document that provides basic information about the goods. Some of the information required on a shipping document is for emergency responders; if the vehicle is involved in an accident, police or firefighters need to know the nature of the dangerous goods and who to contact for more specific information.

The shipping documents are prepared by the shipper (consignor) *before* the carrier takes possession of the dangerous goods. For the photo processor or digital imager that is receiving goods, the shipping document is prepared by the supplier. If you are reshipping goods (either by courier or a company employee), you are responsible for preparing the shipping document.

Type of Document Required

Any waybill, company-designed bill of lading or waste manifest can be used as a shipping document as long as it contains the information required by the regulations. A sample shipping document is included on page 14.

Legibility and Language

The information required on a shipping document must be easy to identify, legible, in indelible print and in English or French.

Mixed Shipments of Dangerous and Non-Dangerous Goods

When using the same shipping document for both dangerous and non-dangerous goods, the following rules apply:

- List the information for the dangerous goods **before** the non-dangerous goods and **under** the heading *Dangerous Goods*, OR
- For the dangerous goods, mark an *X* opposite the shipping name in a column under the heading *DG*.

Keeping Shipping Documents

For each dangerous good you reship, you must keep a copy of the shipping document on file for two years. This copy can be either paper or electronic. Both the shipper (consignor) and the carrier are responsible for ensuring that the information is correct.



Information Required on a Shipping Document

The following items must be included on a shipping document.*

1. The shipper's (consignor's) name and address of the place of business in Canada
2. The date the shipping document was prepared or given to the carrier
3. The description of each of the dangerous goods in the shipment, in the following order:
 - Shipping name (followed by the technical name, where it's applicable)
 - Primary class (followed by subsidiary class, where applicable)
 - UN number
 - Packing group roman numeral

Example description:
Potassium hydroxide, solution, class 8, UN1814, PGII

The diagram shows a line from the example description that branches into four arrows pointing to the four components listed in the bulleted list above. The arrows point from 'Potassium hydroxide, solution' to the shipping name, from 'class 8' to the primary class, from 'UN1814' to the UN number, and from 'PGII' to the packing group.
4. The quantity and unit of measure for each shipping name (e.g., 15L or 15kg) AND the number of containers
5. A 24-hour emergency telephone number where technical information about the dangerous goods can be obtained immediately (e.g., CANUTEC or CHEMTREC) (see page 30)
6. For domestic transport by ship, include the following information:
 - The flashpoint for any Class 3, Flammable liquids
 - The words *marine pollutant* for any dangerous goods identified as a marine pollutant

Location of Shipping Documents During Transport

If you are reshipping by company car or via a company employee, follow these rules:

- If the driver is in the vehicle, the shipping documents must be kept in a pocket mounted on the driver's door or within the driver's reach.
- If the driver is out of the vehicle, the shipping documents must be kept in a pocket mounted on the driver's door, on the driver's seat or in a location that is clearly visible to anyone entering through the driver's door.

Summary

The shipping document describes the dangerous goods that are contained in the transport vehicle, whether it is a third-party delivery truck, a company-owned vehicle or an employee's car. While just about any type of shipping document can be used, the TDG regulations are specific about the information the document must contain.

When you reship photo processing chemicals or inkjet inks that are dangerous goods, be sure to keep a copy of the shipping document for at least two years.

Sample Shipping Document

SHIPPING DOCUMENT						
Destination(City-Town) Name: Address:			Consignor Name: Address:			
Name of carrier		Prepaid <input type="checkbox"/>	Collect <input type="checkbox"/>	Transport unit no.		
Point of origin			Shipping date		Shipper's no.	
REGULATED DANGEROUS GOODS			24 HOUR NUMBER : ERP reference & telephone number :			
Shipping name (technical name) if applicable		class primary	class subsidiary	UN number	packing group/ risk 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's signature		
Received above in apparent good order				Driver's signature		Drivers' no.

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

Test your understanding of this section by answering the review questions on the next page.

Review 2: Shipping Document

Choose the best answer to each of the following questions.

1. Who prepares the shipping document?
 - A. Shipper
 - B. Transporter
 - C. Receiver
 - D. All parties share equal responsibility

2. The TDG regulations require a specific form of shipping document.
True or False

3. Dangerous goods and nondangerous goods can be listed on the same shipping document.
True or False

4. All dangerous goods must be accompanied by a shipping document.
True or False

5. Shippers must keep copies of all dangerous goods shipping documents for 5 years.
True or False

6. When transporting dangerous goods, the driver must keep a copy of the shipping document:
 - A. Attached to the dangerous goods
 - B. Within reach, when the driver is in the vehicle
 - C. In his/her pocket, when the driver leaves the vehicle
 - D. If the shipping document has been faxed, the driver does not need a copy

SHIPPING DOCUMENT					
Shipper's Name Address			Receiver's Name Address		
Product Name		Quantity	Weight	Volume	
Hazardous		Class	Division	ID Number	
REGULATED DANGEROUS GOODS			UNREGULATED GOODS		
UN	TDG	Class	Division	UN	TDG
Special Instructions			Special Instructions		
NON-REGULATED GOODS					
Product Name		Quantity	Weight	Volume	
Special Instructions			Special Instructions		

Marking Dangerous Goods

Containers of dangerous goods must have safety marks and labels applied before they can be shipping.

In general, dangerous goods safety marks must be visible, legible and displayed against a background of contrasting color. The marks must be made of durable and weather-resistant material. **If you are reshipping photo processing chemicals or inkjet inks, you can rely on the manufacturer's safety marks and labels, providing they remain intact and legible.**

Dangerous goods safety marks for photo processing chemical and inkjet inks include all of the following: labels, placards, signs, numbers, letters, abbreviations, and words.

Labels

Labels are diamond-shaped marks that indicate the primary class of dangerous goods by color and symbol and, where applicable, the subsidiary class. We reviewed labels earlier in this booklet.

The labels must appear on any side of the outer surface other than the side that is intended to be the bottom, or the top, if the containers will be stacked. On a cylinder, the label must be applied on the shoulder. Labels need not be applied to inner receptacles in packages unless the packages will be opened in transport.



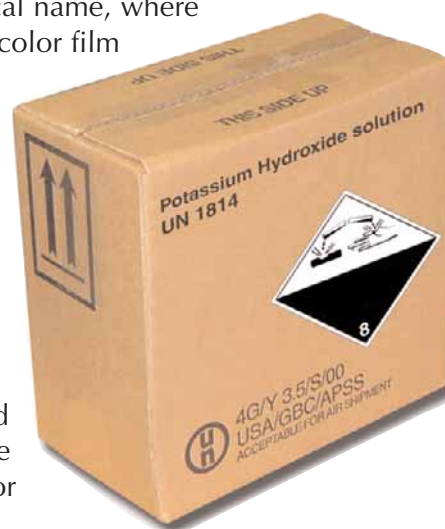
Words

Words are also required on shipping containers. Next to the primary class label, the shipper must display the shipping name of the dangerous good, the technical name, where applicable, and the UN number. For example, a container of color film developer replenisher, part C that is classified as a dangerous good would have the words: *Potassium hydroxide, solution, UN1814.*

A properly marked box is shown in here. Note the shipping name, UN#, and TDG class 8 label.

Placards

Placards are a larger version of the labels and must be applied on *each side* and *each end* of the transport vehicle, so that the placards are visible from any direction. Labels and placards for classes 3 and 8 have an identical color and design.



Shipments of dangerous goods that weigh 500 kg or less are exempted from placarding. This means that when you send photo processing chemicals or inkjet inks to another store by company or employee-owned vehicle, that vehicle doesn't need to have placards.

Other Safety Marks

When transported by ship, any chemical that is classified as a marine pollutant must bear the the **marine pollutant mark**. In cases where this applies, the manufacturer will apply the marine pollutant mark.



Summary

Dangerous goods marks include **labels**, **words** and **placards**.

- The labels indicate the class of dangerous goods.
- Words provide the shipping and technical names and the UN number of the dangerous goods.
- Placards are used on the outside of a vehicle to provide information about the contents of the vehicle as it travels to its destination.

labels, words and marks allow photo processors and digital imagers to determine the type of dangerous materials contained in the shipping box and on the delivery vehicle.

Test your understanding of this section by answering the review questions on the next page.

Review 3: Marking Dangerous Goods

Choose the best answer to each of the following questions.

1. Placards are used
 - A. On the carton
 - B. By the receiver
 - C. On the actual product itself
 - D. On the transport vehicle
2. The TDG regulations require both labels and words on containers of dangerous goods.
True or False
3. Safety marks include
 - A. Labels
 - B. Words
 - C. UN number
 - D. All of the above
4. All dangerous goods must have safety marks.
True or False
5. A vehicle containing dangerous goods is exempt from placarding if:
 - A. The vehicle weighs less than 2,500 kg
 - B. The dangerous goods being transported weigh less than 500kg
 - C. There are MSDSs in the front seat by the driver
 - D. Your supervisor says its OK to take them to another store



Packaging Dangerous Goods

A critical aspect of handling is the packaging of dangerous goods into appropriate and approved containers. **Suitable packaging greatly reduces the risk of an incident.**

A dangerous good must be packaged in a container that is strong enough that the contents will not spill or leak under normal conditions of transport. The regulations specify that containers must meet UN packaging standards meaning that dangerous goods cannot be packed into any old box, jug or drum.

Whether the container is a carton, bottle, tote or carboy, and whether it is made of glass, plastic, metal or cardboard, the container design must have been tested and found compliant with the applicable standard for that type of container.

Compliance is indicated by a visible mark on the outside of the container.

The shipper is responsible for checking the mark and ensuring that appropriate packaging has been used for a shipment. All packaging used to contain dangerous goods in Classes 3, 4, 5, 6.1, 8 or 9 must be UN standardized packaging. The UN mark must appear on the container.



Photo processors and digital imagers that reship dangerous goods must reship them in UN certified packaging. Where it's possible, simply use the original packaging from the manufacturer.

Test your understanding of this section by answering the review questions on the next page.

Review 4: Packaging Dangerous Goods

Choose the best answer to each of the following questions.

1. Proper packaging reduces the risk of spills or releases of dangerous goods.
True or False
2. Corrosive liquids and flammable liquids require UN certified packaging.
True or False
3. If a package does not have a UN mark on it, it cannot be used for shipping class 3 or class 8 dangerous goods.
True or False



Shipping Dangerous Goods by Car

Photo processors or digital imagers may decide to use an employee car or company-owned vehicle to transport materials that are classified as dangerous goods. For example, you may have to take samples to a customer or drop off a container of product. When transporting dangerous goods you can avoid placarding the vehicle if you meet the following requirements:

- The total load is less than 500 kg of dangerous goods
- No single container is heavier than 30 kg
- Each container is designed to withstand normal conditions of transport
- The containers are accompanied by a shipping document that includes the primary class of the dangerous goods in each package and the number of packages following the words *number of means of containment* (e.g., *Class 8, number of means of containment, 12*)
- Each package has the appropriate safety marks displayed, including the shipping name, technical name (where applicable) and the UN number
- The person transporting the dangerous goods is trained and certified



If all of the above criteria are met, you don't have to placard your vehicle. If your suspension can survive it and you do carry more than 500 kg in your car, then you need four placards placed so that one is visible from every direction.

If you leave the vehicle while the dangerous goods remain in the vehicle, place the shipping documents on the driver's seat. For emergency response purposes, it is good practice to carry a material safety data sheet (MSDS) for each product in the vehicle.

**Test your understanding of this section by answering
the review questions on the next page.**

Review 5: Shipping Dangerous Goods by Car

Choose the best answer to each of the following questions.

1. Dangerous goods can be shipped by car as long as the total load is less than 5000 kg.
True or False
2. When you transport dangerous goods by a personal car, you do not need to use a shipping document.
True or False
3. Any person who transports dangerous goods, whether in a company-owned vehicle or an employee-owned vehicle, must carry a valid TDG training certificate.
True or False
4. Loads of less than 500 kg are exempted from placarding.
True or False



Training

Anyone who handles, ships or transports dangerous goods must be trained and hold a valid training certificate, or must work in the presence and under the *direct supervision* of a person who has been trained and certified. Training must relate to the person's duties. In the case of photo processing and digital imaging, training topics include the following:

- Dangerous goods classification
- Shipping names
- Shipping document
- Dangerous goods safety marks
- Certification safety marks on packaging
- Spills and other releases reporting
- Safe handling and transportation practices



Training Certificate

When the *employer* believes that an employee is adequately trained, the *employer* must issue a training certificate to the employee. The certificate must be signed by the employer and include the following information:

- Name and address of the employer's business
- Employee's name
- Date the training certificate expires, preceded by the words *Expires On*
- Aspects of the regulations in which the employee is trained
- Employer's signature
- Employee's signature

The training certificate is valid for 36 months after the date it was issued and only in the workplace for which the certificate was issued.

If an inspector asks an employee to see his/her training certificate, the employee must show it immediately. Therefore, all trained employee should carry their training certificate on their person or keep the certificate in their workplace locker.

For Certification

For third-party certification, download the order form and fax it to 1-800-267-1337. You will receive a test by fax or email. Certificates will be issued to all who successfully complete the test.

Maintaining Training Records

An employer must keep a record of training as well as a copy of a training certificate for at least two years *after the date the certificate has expired*. If an inspector submits a written request for a copy of an employee's training certificate, the employer has 15 days to provide it.

Review 6: Training



Choose the best answer to each of the following questions.

1. The following people must receive dangerous goods training.
 - A. Shippers
 - B. Receivers
 - C. Employees who transport dangerous goods
 - D. All of the above

2. Employees who are not TDG certified must work under the direct supervision of a person who is certified.
True or False

3. A TDG training certificate is valid for
 - A. 2 years
 - B. 3 months
 - C. 3 years
 - D. For as long as you work at the company

4. A TDG training certificate is valid only when you are employed by the company that signed the certificate.
True or False

Accidental Release and Reporting

The TDG regulations establish a reportable quantity for each class of dangerous goods. When a spill or release of dangerous goods occurs in excess of the reporting quantity for that class, the incident must be reported. These reporting thresholds are listed in the chart below.

Reportable Quantity Thresholds	
<i>Class</i>	<i>Reportable Quantity</i>
Class 3 (flammable liquids)	200 liters
Class 6.1 (toxics)	5 kg or 5 liters
Class 8 (corrosives)	More than 5 kg or 5 liters

If there is a spill or release that is not contained within your facility, whoever has possession of the dangerous goods **at the time of the accident** — shipper, carrier or receiver — must immediately notify the following persons:

- Provincial authority (see list below)
- The person's employer
- Owner of the vehicle (if in transport by road)
- CANUTEC (if in transport by rail, ship or air) (613/996-6666)
- Shipper (consignor) of the goods

Authorities for Reporting Releases of Dangerous Goods	
Province	Authority
Alberta	The province at 800-272-9600 AND the local police
British Columbia	The province at 800-663-3456 AND the local police
Manitoba	The province at 204-945-4888 AND the local police
New Brunswick	The province at 800-565-1633 OR the local police.
Newfoundland and Labrador	Canadian Coast Guard at 709-772-2083 AND the local police
Northwest Territories	The territory government at 867-920-8130
Nova Scotia	The province at 800-565-1633 OR the local police
Nunavut	The territory government at 800-565-1633 AND the local police
Ontario	The local police
Prince Edward Island	The local police
Quebec	The local police
Saskatchewan	The local police
Yukon	The territory government at 867-667-7244

Immediate Report

The **immediate report** must include as much of the following information that's known at the time of the report:

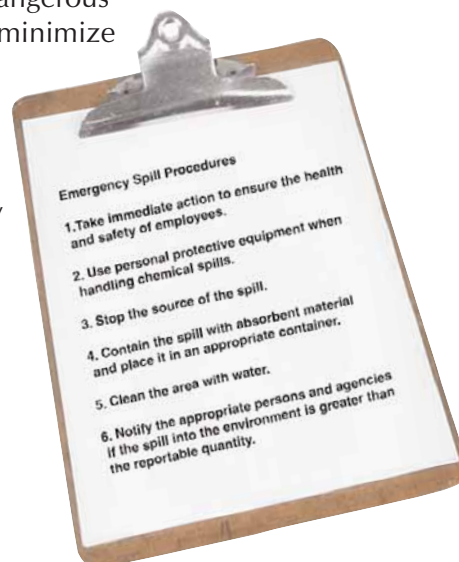
- Shipping name or UN number of the released material
- Quantity of material carried and released (spilled)
- Description of the condition of the shipping containers
- Location of the spill
- Number of injuries (and deaths, where applicable)
- Number of people evacuated

Follow-Up Report

In cases where an immediate report was filed, the employer is responsible for submitting a written **follow-up report** within 30 days to Transport Canada. The follow-up report includes the same type of information as the immediate report, but with the final figures and results included.

Emergency Spill

In the case of a spill, the person who has possession of the dangerous goods at the time is required to take reasonable measures to minimize the risk to the environment and public safety without putting themselves in danger. For example, if the spill occurs while a photo lab employee is transporting the chemicals, the driver is responsible. Very simple sample emergency response procedures are listed on the clipboard below. Know and use your company's emergency spill procedures if there is a spill or release of a dangerous good.



Test your understanding of this section by answering the review questions on the next page.

Review 7:

Accidental Release and Reporting

Choose the best answer to each of the following questions.

1. Who is responsible for reporting a spill of a dangerous good?
 - A. The company that is receiving the dangerous good
 - B. The company that manufactured dangerous good
 - C. The property owner on which the spill occurred
 - D. The party that has possession of the spill at the time it occurred

2. The reporting threshold for corrosive liquids is
 - A. 5 liters
 - B. 10 liters
 - C. 20 liters
 - D. 200 liters

3. When reporting a spill or release of a dangerous good, the person making the report must contact the provincial authority.
True *or* False

4. The immediate report must include the names of all people who witnessed the spill.
True *or* False

5. A follow-up report must be submitted within
 - A. 30 hours
 - B. 30 days
 - C. As soon as possible
 - D. 3 weeks

6. People who handle dangerous goods must be trained in their company's spill procedures.
True *or* False

Shipping Samples, Limited Quantities/Consumer Commodities

Shipping Samples

Occasionally a photo processor or digital imager may have to ship a sample of chemistry back to your supplier, or a chemical sample for analysis. There are reduced requirements for **shipping samples** of dangerous goods, when the samples are to be used for classifying, analyzing, testing or demonstration. The conditions for shipping dangerous goods as samples are listed below:

- The samples are believed *not* to contain explosives, infectious substances or radioactive materials
- The gross mass of the samples is less than or equal to 10 kg.
- The samples are accompanied by a shipping document that includes the name and address of the shipper (consignor) and the words *test samples*.
- The packaging used will not leak under normal transport condition.
- The package is marked with the words *test samples* in a color that contrasts with the background.



Limited Quantities/Consumer Commodities

You may receive photo processing chemical, inkjet inks or other chemicals that bear the words **limited quantity or consumer commodity**. These are materials that *are* dangerous goods but the amount of material in the container is small enough that the TDG regulations *exempt* the container from TDG requirements.

There are two requirements for shipping dangerous goods that meet the volume/weight requirements for the limited quantity/consumer commodity exemption:

- The container/carton must bear the words *limited quantity or consumer commodity*.
- If the total shipment of limited quantity/consumer commodity chemicals is greater than 500 kg, you must provide a shipping document that includes the words Limited Quantity or Ltd. Qty. or Consumer Commodity. If the total shipment is less than 500 kg, you do not have to use a shipping document.



If you are reshipping a small amount of a dangerous goods and you want to know if it meets the requirements for limited quantity, contact the chemical manufacturer for advice.

Review 8: Shipping Samples, Limited Quantities/Consumer Commodities

Choose the best answer to each of the following questions.

1. When shipping samples, you are restricted to a weight of 5 kg or less.
True or False
2. For using the exemption for shipping test samples, the TDG regulations require that the container be marked with the words
 - A. Gross mass is less than 10 kg
 - B. Fragile - do not drop
 - C. Return to sender if undeliverable
 - D. Test samples
2. The TDG exemption for limited quantity can be used when
 - A. Only class 2 goods are being shipped
 - B. The containers meet the TDG limited quantity requirements
 - C. It's not convenient to use the TDG marks and labels
 - D. None of the above
3. Limited quantities are dangerous goods packaged in small amounts.
True or False
4. Every container of a limited quantity must be marked with the words *limited quantity*.
True or False



CANUTEC and CHEMTREC

CANUTEC

CANUTEC, the Canadian Transport Emergency Centre, is an office within the federal Department of Transport. CANUTEC's mission is to promote public safety in the transportation of dangerous goods.

CANUTEC offers a 24-hour emergency telephone service. Shippers who wish to use CANUTEC's emergency telephone number on their dangerous goods shipping documents, must first contact CANUTEC at (613) 992-4624 and provide them with copies of the MSDSs for the goods involved. In Canada, registration with CANUTEC is free of charge.

To call CANUTEC in an emergency, use the following numbers:

- Emergency (613) 996-6666 (call collect)
- Toll-free cellphone emergency *666

If you are reshipping a dangerous good, refer to the shipping document the supplier used to ship the materials to you. If the supplier marked CANUTEC as the 24-hour emergency phone number, you can do the same on your shipping document.



CHEMTREC

CHEMTREC, the Chemical Transportation Emergency Center, is a public service of the Chemical Manufacturers Association. However, CHEMTREC, is not intended, nor equipped to function as a general information source. CHEMTREC deals only with chemical transportation emergencies and operates 24-hours a day, 7 days a week.



In the event of chemical transportation emergency, CHEMTREC provides immediate advice for those at the scene of emergencies, then promptly contacts the shipper of the chemicals for more detailed assistance and appropriate follow-up.

To call CHEMTREC in an emergency, use the following numbers :

- Continental US and Canada: 800/424-9300
- Outside of Continental US and Canada: 703/527-3887 (can be called collect)

If you are reshipping a dangerous good, refer to the shipping document the supplier used to ship the materials to you. If the supplier marked CHEMTREC as the 24-hour emergency phone number, you can do the same on your shipping document.

Review 9: CANUTEC and CHEMTREC

Choose the best answer to each of the following questions.

1. CANUTEC is a Canadian 24-hour emergency contact for all dangerous goods.
True or False
2. CHEMTREC is a U.S. 24-hour emergency contact for dangerous goods that have been registered with them.
True or False
3. If you are reshipping dangerous goods, you may use either CANUTEC or CHEMTREC as the 24-hour emergency contact *only* if you have registered with them.
True or False



Dangerous Goods Certification

Anyone who handles, ships or transports dangerous goods must be trained and hold a valid training certificate. To be trained adequately means having a sound knowledge of the following topics that relate to the person's duties.

When the *employer* believes that an employee is adequately trained, the *employer* must provide a signed training certificate to the employee.

To get your training certificate, ready for your employer's signature, download the TDG test order form on this website, complete it and fax it to Envision Compliance at 1-800-267-1337.

Envision will review the answers, score the test and issue a certificate of TDG training ready for your employer's signatures.

***** **Get in compliance with transportation regulations today.** *****

Understanding Transportation of Dangerous Goods