

Labels and Markings

In Canada, the transportation of dangerous goods is governed by the Transportation of Dangerous Goods (TDG) Regulations. These regulations require specific labels and markings to be applied to packages, containers, and vehicles transporting dangerous goods. Here are the key requirements for labels and markings:

Labels

- Packages containing dangerous goods must be labeled with a Class label that indicates the primary hazard class of the contents. For example, packages containing flammable liquids must be labeled with a "Flammable Liquid" label.
- Certain substances may require additional subsidiary risk labels to indicate specific hazards associated with the material.
- Labels must be durable, weather-resistant, and prominently displayed on each package.
- Labels must meet specific size and color requirements outlined in the TDG Regulations.

Markings

- Markings provide information about the contents of packages, containers, or vehicles transporting dangerous goods.
- Each package or container must be marked with the proper shipping name of the dangerous goods and the identification number assigned to the substance or article.
- Markings must be durable, legible, and prominently displayed on each package or container.
- Markings must be in English or French, or in both languages if required by the regulations.

Other Markings

- Certain substances may require additional markings to indicate specific hazards or handling instructions. For example, packages containing radioactive materials may require the display of a radioactive trefoil symbol.
- Markings must comply with any additional requirements specified in the TDG Regulations or other applicable standards.

Safety marks are a diamond shape and are different than WHMIS or consumer labels.

This system uses:

- Shape
- Colour (ie. Blue means dangerous when it comes in contact with water)
- Symbol
- Number at the bottom indicating class
- The UN number must be with the shipping name or on the class label

Safety marks for small containers are called labels.

NOTE: Generally speaking, a placard must be displayed for each of the dangerous goods transported in a large means of containment regardless of the quantity. Also, regardless of the quantity of dangerous goods on board, the primary class placard for each of the dangerous goods in a large means of containment must be displayed on each side and on each end of the “large means of containment” or “means of transport”. If two or more dangerous goods have different UN numbers but are identified by the same placard or placards, the placard is required to be displayed only once on each side and on each end of a large means of containment regardless of how many products in the large means of containment have that class (primary or subsidiary) [See Section 4.15 in the TDG Regulations].

See the images below for examples of how to place the dangerous goods placards on large means of containments such as a highway tank (Figure 1), and compartmentalized means of containment (Figure 2).

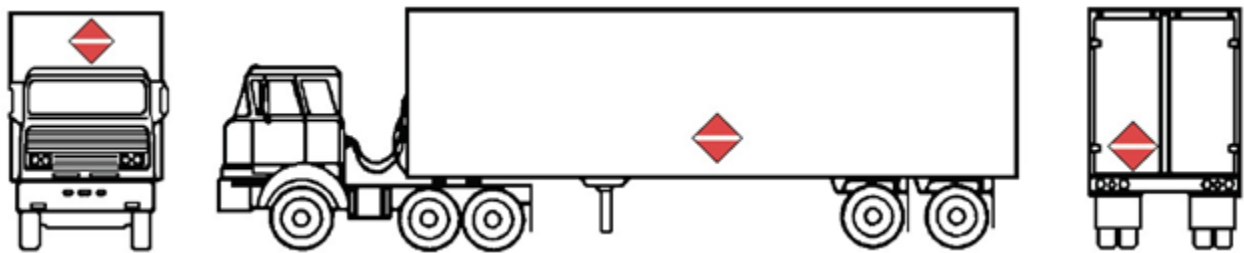
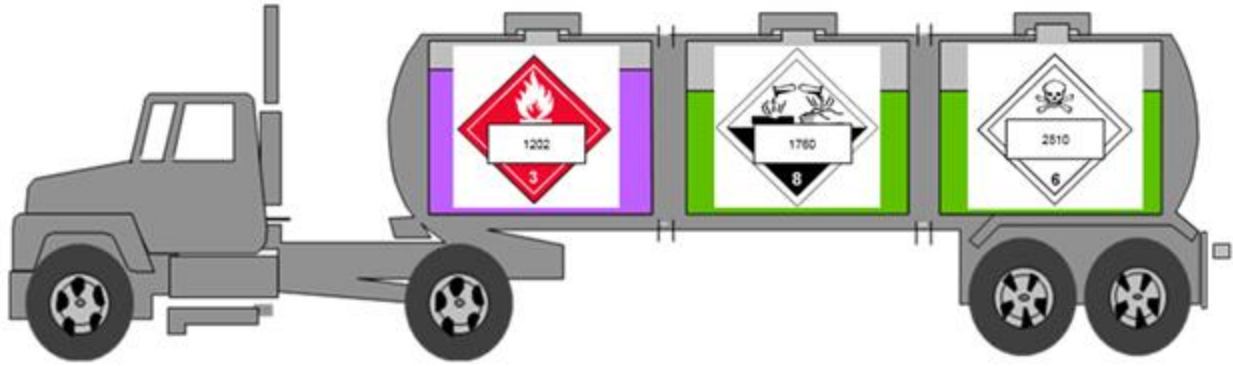


Figure 2: Placard requirement and placement for a single dangerous good transported in a highway tank Image from Transport Canada.



Placards

In Canada, placards play a crucial role in identifying vehicles and transport units carrying dangerous goods. Placards are large, diamond-shaped signs that display standardized symbols and text to indicate the primary hazard class of the materials being transported. Here's what you need to know about placards for the transportation of dangerous goods in Canada:

1. **Placement:** Placards must be displayed on all four sides of a vehicle or transport unit carrying dangerous goods. They should be positioned in a prominent and easily visible location, ensuring that they are clearly legible from a distance.
2. **Size and Shape:** Placards must meet specific size and shape requirements as outlined in the Transportation of Dangerous Goods (TDG) Regulations. They are typically diamond-shaped, with sides measuring at least 250 mm (approximately 9.8 inches). If a full-size placard won't fit, a smaller version can be used on the large container.
3. **Colors:** Placards are color-coded according to the primary hazard class of the dangerous goods being transported. Each hazard class has its own designated color, as follows:
 - Class 1 (Explosives): Orange background
 - Class 2 (Gases): Green background
 - Class 3 (Flammable Liquids): Red background
 - Class 4 (Flammable Solids): Red and white stripes
 - Class 5 (Oxidizing Substances and Organic Peroxides): Yellow background
 - Class 6 (Toxic and Infectious Substances): White background with black symbol
 - Class 7 (Radioactive Materials): Yellow background with black symbol and text
 - Class 8 (Corrosive Substances): White background with black symbol

- Class 9 (Miscellaneous Dangerous Goods): White background with black symbol and text



4. **Symbols and Text:** Placards feature standardized symbols and text representing the primary hazard class of the dangerous goods. The symbols and text are universally recognized and help identify the nature of the hazards associated with the materials being transported.
5. **Requirements:** Placarding requirements vary depending on the quantity and class of dangerous goods being transported. Certain quantities of specific classes of dangerous goods require placarding, while others may be exempt. Refer to the TDG Regulations for specific placarding requirements based on the type and quantity of dangerous goods being transported.
6. **Removal:** Placards must be removed from vehicles or transport units once they are no longer carrying dangerous goods. Failure to remove placards when they are no longer required can lead to confusion and potential safety hazards.


Note: Products that have more than one type of hazards usually required placards for only the primary risk. For most shipments, the UN number of the dangerous goods has to be shown as well.

Furthermore, Overpack is an enclosure that is used to consolidate one or more small containers. It may be a large box or a shrink wrapped pallet. If the safety marks cannot

be seen, the safety marks and the word OVERPACK must be shown. If the overpack is larger than 1.8 cubic metres in size, the marks must be shown on opposite sides.

Overall, placards are essential for ensuring the safe and compliant transportation of dangerous goods. They provide vital information to emergency responders, enforcement officials, and other personnel encountering vehicles or transport units carrying hazardous materials.

General Placarding Guidelines

General Placarding Guidelines			
Guideline	Dangerous Goods	Placards	UN Number
1	500 kg or less, unless the shipment: - applies to Placarding Guide 1 or 2	No	No
2	More than 500 kg, unless the shipment: - applies to Placarding Guide 1 or 2	Yes	No
3	Mixed load over 500 kg, unless the shipment: - applies to Placarding Guide 1, 2 or 5 <i>See special rules for Class 1 (Explosives) and Class 2 (Gases) below.</i>	Yes OR 	No
4	Shipment requiring an ERAP*	Yes	Yes
5	Liquid or gas in a large** container	Yes	Yes

* In mixed loads, products requiring an ERAP (Emergency Response Assistance Plan) are placarded separately
 ** Large container: more than 450 litre capacity