

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

Transportation of Asbestos as a Waste

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Alberta 

Transportation of Asbestos as a Waste
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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

Asbestos is a group of impure magnesium silicate minerals that occur in a fibrous form. Asbestos mineral colours vary over a broad range: white, brown, grey and green.

Special Provision 139 of the Transportation of Dangerous Goods (TDG) Regulations states that asbestos that is immersed or fixed in a natural or artificial binder in such a way that no release or hazardous quantities of respirable asbestos fibres can occur during transport, or manufactured articles containing asbestos that is not immersed or fixed when packed so that no release of hazardous quantities of respirable asbestos fibres can occur during transport, are not subject to the TDG Regulations.

All other asbestos materials or waste asbestos materials, when NOT fixed in a natural or artificial binder material or included in a manufactured product or package properly is regulated and falls into two categories in the Transportation of Dangerous Goods (TDG) Regulations:

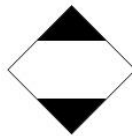
UN Number	Shipping Name	Class	Packing Group	Explosive Limit and Limited Quantity Index	Passenger Carrying Vehicle or Passenger Carrying Railway Vehicles Index
UN2212	ASBESTOS, AMPHIBOLE (actinolite, amosite, anthophyllite, crocidolite, tremolite) when not fixed in a natural or artificial binder material or included in a manufactured product	9	II	1 kg	Forbidden
UN2590	ASBESTOS, CHRYSOTILE, when not fixed in a natural or artificial binder material or included in a manufactured product	9	III	5 kg	200 kg

Both categories belong to Class 9. ASBESTOS, AMPHIBOLE is more hazardous and it has a packing group of II. ASBESTOS, CHRYSOTILE is less hazardous and it has a packing group of III. CHRYSOTILE asbestos is the most common form of asbestos used in many applications such as brakes, insulation and pipe.

ASBESTOS, AMPHIBOLE cannot be shipped in a passenger carrying road or rail vehicle. The maximum net quantity of ASBESTOS, CHRYSOTILE that can be transported in a passenger vehicle is 200 kg.

The TDG Regulations do not apply to a limited quantity of dangerous goods in transport on a road or rail vehicle, if all of the following conditions are met (Refer to Section 1.17 of the TDG Regulations for a full explanation of the Limited Quantity exemption):

- The dangerous goods are in one or more means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety; and
- Each outer means of containment has a gross mass less than or equal to 30 kg. For ASBESTOS, AMPHIBOLE the inner package must be 1 kg or less and ASBESTOS, CHRYSOTILE must be 5 kg or less.
- The 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 mark below.



- The marking must be visible and legible. If the asbestos is in an overpack, and the marks on the inner container are not visible, the overpack must be marked the word overpack and the diamond listed above.

Documentation

According to Alberta Environment and Parks, shipping waste asbestos does not require a Provincial Waste Manifest as long as the following conditions are met:

- The waste asbestos is in double bags, well-covered and transported according to the TDG Regulations; and
- The receiving landfill has been given notification about the shipment and has agreed to receive it.

According to Section 3.2(2) of the Transportation of Dangerous Goods Regulations, the shipping document must be in paper format; electronic format is not acceptable. It is the responsibility of the consignor to prepare a proper shipping document when offering dangerous goods for transportation (Section 3.1). The shipping document is similar to a standard bill of lading but must contain specific information needed to describe the dangerous goods. The shipping document is provided to the initial carrier and must accompany

the consignment throughout its journey. The consignor and each carrier that transported the load shall retain a copy of the shipping document for a period of two years (Section 3.11).

The following is the minimum required information, which 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)
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)

Shipping Document Information	When Required	Sections in the TDG Regulations
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.

Safety Marks

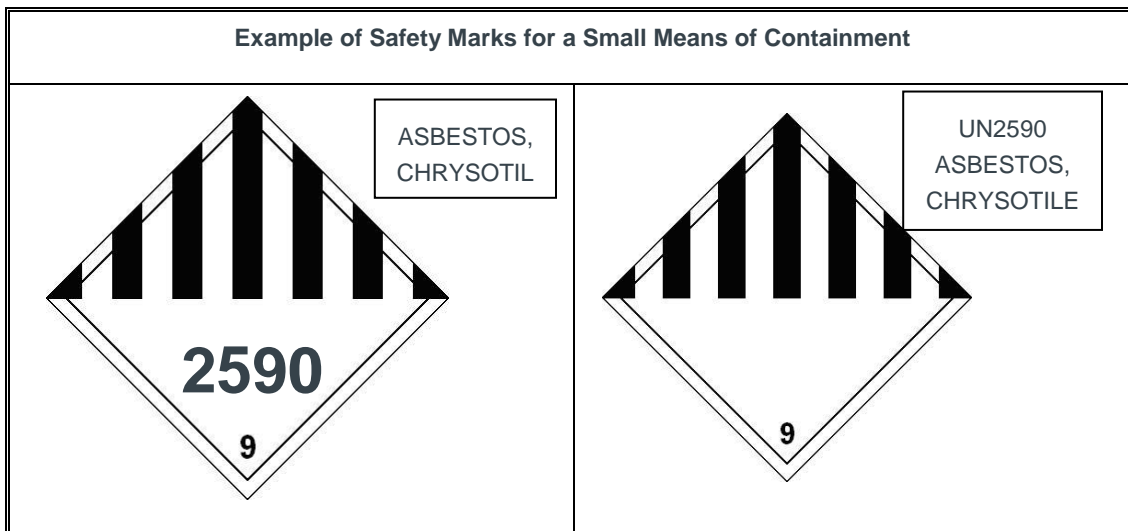
Safety marks are labels, placards, UN numbers and package markings. They are described in Part 4 of the TDG Regulations. The consignor is responsible for displaying safety marks on all means of containment carrying dangerous goods (Section 4.4).

The carrier is responsible for making sure that the safety marks remain displayed during transport. The carrier is also responsible for removing or changing the safety marks if the requirements for dangerous goods safety marks change during transport (Section 4.5).

Labels on Small Means of Containment

A small means of containment has a capacity of 450 L or less. A small container must display the dangerous goods label(s), the shipping name and the UN number of the product (Sections 4.10 to 4.12). A label is at least 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)].

The UN number for a dangerous goods label can be placed next to the label as shown below [Section 4.8(1)(b)].



Placards on Large Means of Containment

Placards are larger safety marks with sides at least 250 mm long. A large means of containment has a capacity greater than 450 L. According to Section 4.15(1) a large means of containment requires placards if the dangerous goods have a total gross mass greater than 500 kg.

If dangerous goods are in a means of containment that is inside another large means of containment and placard or UN number is not visible from outside the outer large means of containment, the placard or UN number must also be displayed on the outer large means of containment [Section 4.15.4].

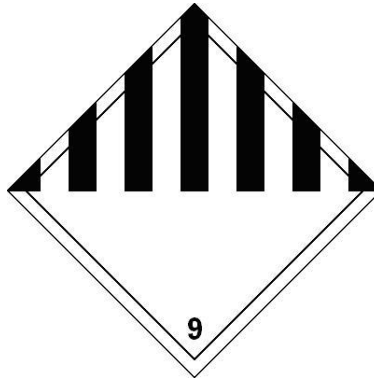
The placard must be displayed on each side and each end of a large means of containment, except that the placard may be displayed on

- a frame permanently connected to the large means of containment, such as a truck frame or a support frame of the means of containment, if the resulting positions of the placards and any
- associated UN numbers are equivalent to positions on each side and each end of the large means of containment; or
- the front of a truck, instead of on the leading end of a trailer unit of the truck. The trailer unit of a truck includes a tank [Section 4.15 (3)].

The UN number is not required to be displayed on large means of containment in shipping asbestos.

Example of Safety Marks for a Large Means of Containment

In this case the product is ASBESTOS, AMPHIBOLE



Class 9 placard has 7 black stripes with a white background

Training

Anyone who handles, offers for transport or transports dangerous goods must have a valid TDG 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 in Section 6.2 of the TDG Regulations that relate directly to the person's duties.

An employer issues a training certificate when they have reasonable grounds to believe that an employee possesses adequate training. The training certificate may be in paper or electronic format. 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 his/her training certificate (Section 6.6). The training certificate must be immediately presented to an inspector who requests it (Section 6.8).

Reporting Requirements

In case of a release or an anticipated release of dangerous goods, the person who has possession of the dangerous goods must report immediately to the local police, or RCMP, and Alberta EDGE (1-800-272-9600). In the case of asbestos, an Emergency Report is required when there is **any release of 30 kg or more** (Section 8.2). For details of reporting requirements, consult Part 8 of the TDG Regulations or call Alberta EDGE at 1-800-272-9600 and ask for the bulletin entitled [Reporting Requirements](#).

**ENVIRONMENTAL AND DANGEROUS
GOODS EMERGENCIES**

DANGEROUS GOODS & RAIL SAFETY
24 hour toll free service, call
1-800-272-9600
Edmonton area: 780-422-9600

Alberta
Government

DANGEROUS GOODS SHIPPING DOCUMENT FOR ROAD TRANSPORT ON CANADIAN SHIPMENTS

CONSIGNOR Name: Address:			DESTINATION (City-Town) Name: 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				_____ Consignee's 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.