Limited and Excepted Quantities

August 2018
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.

Alberta EDGE (Environmental and Dangerous Goods Emergencies)

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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 Officer 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).
This bulletin has been prepared to help consignors of dangerous goods understand and identify the exemptions provided for limited quantities and consumer commodities in the Transportation of Dangerous Goods (TDG) Regulations.

Relaxation of certain requirements of the TDG Regulations is acceptable for properly packaged dangerous goods in small quantities that do not pose as severe a hazard as larger quantities of dangerous goods. For this reason, the concept of limited quantity and consumer commodity was incorporated into the Regulations. For certain modes of transport, additional requirements must be met. The TDG Regulations should be consulted for further information.

DEFINING LIMITED QUANTITIES

Section 1.17 exempts dangerous goods transported in limited quantities and as consumer commodities:

1.17 Limited Quantities Exemption

(1) A quantity of dangerous goods, other than explosives, is a limited quantity if

(a) the dangerous goods are in one or more means of containment that 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

(b) each means of containment has a gross mass less than or equal to 30 kg and the dangerous goods

   (i) if a solid, have a mass that is less than or equal to the number shown for them in column 6(a) of Schedule 1 when that number is expressed in kilograms,

   (ii) if a liquid, have a volume that is less than or equal to the number shown for them in column 6(a) of Schedule 1 when that number is expressed in litres, or

   (iii) if a gas, including a gas in a liquefied form, are contained in one or more means of containment each of which has a capacity less than or equal to the number shown for them in column 6(a) 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 (Reporting Requirements) do not apply to the handling, offering for transport or transporting of limited quantities of dangerous goods on a road vehicle, a railway vehicle or a ship on a domestic voyage if each means of containment is legibly and durably marked on one side, other than a side on which it is intended to rest or to be stacked during transport, with the mark illustrated in subsection (5).

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

(i) the gross mass of the outer means of containment is less than or equal to 30 kg

(ii) the outer means of containment is not intended to be opened during transport, and

(iii) the outer means of containment is legibly and visibly marked, on a contrasting background, with the mark illustrated in subsection (5).

When a limited quantity of dangerous goods is in a means of containment that is inside an overpack, the following information must be displayed on the overpack unless the marks on the small means of containment are visible through the overpack:

(a) the word “Overpack”; and

(b) the mark illustrated in subsection (5), legibly and visibly marked on a contrasting background.

The mark is a square on a point, and the line forming the square on point must be at least 2 mm wide. The top and bottom portions must be black and the central portion must be white or a contrasting colour. Each side of the mark must be at least 100 mm long. The letter “Y” may be displayed in the centre of the mark if the limited quantity is in compliance with the ICAO Technical Instructions. If the size of the means of containment so requires, the length of each side may be reduced to not less than 50 mm, provided that the mark remains clearly visible.

Until December 31, 2020, instead of being marked with the mark illustrated in subsection (5), a means of containment may have displayed on it
(a) the words “Limited Quantity”;

(b) the abbreviation “Ltd. Qty.”;

(c) the words “Consumer Commodity”; or

(d) the UN number of each limited quantity of dangerous goods preceded by the letters "UN", placed within a square on point.

(7) For the purposes of paragraph 6(d), the line forming the square on point must be black and be at least 2 mm wide. If the dangerous goods have different UN numbers, the square on point must be large enough to include each UN number, but in any case each side must be not less than 50 mm long. The UN numbers and letters must be at least 6 mm high. The line, UN numbers and letters must be on a contrasting background.

<table>
<thead>
<tr>
<th>Limited Quantities Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Limited Quantities Mark Diagram" /></td>
</tr>
</tbody>
</table>

The mark is a square on a point, and the line forming the square on point must be at least 2 mm wide. The top and bottom portions must be black and the central portion must be white or a contrasting colour. Each side of the mark must be at least 100 mm long. The letter “Y” may be displayed in the centre of the mark if the limited quantity is in compliance with the ICAO Technical Instructions. If the size of the means of containment so requires, the length of each side may be reduced to not less than 50 mm, provided that the mark remains clearly visible.
1.4 Definitions

In the following definitions, words that are also defined or that are variations of words that are defined are underlined. The meanings of the variations should be drawn from the defined terms. The meanings of other words that are not defined can be found in a dictionary or a scientific or technical handbook, journal or text or a similar publication. The definitions in this section, which include the definitions from the Act, apply in these Regulations.

**Overpack**

means an enclosure that is used by a single consignor to consolidate one or more small means of containment for ease of handling but that is not a minimum required means of containment. This definition does not include a large means of containment or a unit load device, as defined in the ICAO Technical Instructions that is intended for transport by aircraft.

*Examples of overpacks include*

(a) a pallet on which are placed or stacked one or more small means of containment that are secured by straps, shrink wrap, stretch wrap, nets or other similar means; and

(b) a disposable box, crate or bin in which one or more small means of containment are placed.
4.10.1 Safety Marks on an Overpack

(1) When a safety mark is required by this Part to be displayed on a small means of containment and the small means of containment is inside an overpack, the person who prepares the overpack must display

(a) the word “Overpack” on at least one side of the overpack;

(b) the information required by subsection (3) on one side of the overpack, if its capacity is less than 1.8 m³ (64 cubic feet); and

(c) the information required by subsection (3) on two opposite sides of the overpack, if its capacity is greater than or equal to 1.8 m³ (64 cubic feet).

(2) Paragraphs (1)(b) and (c) do not apply if the safety mark on the small means of containment is visible through the overpack.

(3) The following information must be displayed on the overpack:

(a) the primary class label and each subsidiary class label for each of the dangerous goods contained in the overpack, except that only one label is required for dangerous goods that are included in the same class; and

(b) the shipping name and UN number of the dangerous goods.

(4) When dangerous goods included in Class 7, Radioactive Materials, are transported in an overpack and a label is required to be displayed by this Part, the overpack must be prepared in accordance with section 16(4) of the "Packaging and Transport of Nuclear Substances Regulations".
Example of a Limited Quantity of Dangerous Goods in a Means of Containment Inside an Overpack with a Capacity of Less Than 1.8 m³ (64 cubic feet)

<table>
<thead>
<tr>
<th>Limited quantity of dangerous goods in an outer means of containment each with a gross mass of less than or equal to 30 kg</th>
</tr>
</thead>
</table>

Limited quantities mark - the top and bottom portions must be black and the central portion must be white or a contrasting colour.

When a limited quantity of dangerous goods is in a means of containment that is inside an overpack, the following information must be displayed on the overpack unless the marks on the small means of containment are visible through the overpack: the word "Overpack" and the limited quantities mark legibly and visibly marked on a contrasting background.
Example of a Limited Quantity of Dangerous Goods in a Means of Containment Stacked on a Pallet Type of Overpack Secured by Straps

When the limited quantity marks on a means of containment are visible through the overpack, the following information must be displayed on the overpack: the word "Overpack" must be displayed on at least one side of the overpack.
DEFINING EXCEPTED QUANTITIES

A quantity of dangerous is an excepted quantity if it is transported in an appropriate inner and outer means of containment, meaning that a standardized means of containment is not required. The dangerous goods in the inner means of containment must have a mass, volume or capacity that is less than or equal to the number shown in Column 1 of the table found in 1.17.1(2). The quantities of dangerous goods for the Excepted Quantities Exemption are much less than the ones for the Limited Quantities Exemption. As such, the units of measure for the Excepted Quantities Exemption are grams and milliliters, which is 1000 times less than the unit for Limited Quantities Exemption, which are kilograms and liters.

Section 1.17.1 exempts dangerous goods transported in excepted quantities:

1.17.1 Excepted Quantities Exemption

(1) A quantity of dangerous goods, other than explosives, is an excepted quantity if

(a) the dangerous goods are in an inner means of containment and an outer means of containment that are 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;

(b) any of the dangerous goods in the inner means of containment,

(i) if solids, have a mass that is less than or equal to the number shown in column 1 of the table to subsection (2) for the corresponding alphanumeric code in column 6(b) of Schedule 1, when that number is expressed in grams,

(ii) if liquids, have a volume that is less than or equal to the number shown in column 1 of the table to subsection (2) for the corresponding alphanumeric code in column 6(b) of Schedule 1, when that number is expressed in milliliters, or

(iii) if gases, including a gas in a liquefied form, are contained in one or more means of containment each of which has a capacity less than or equal to the number shown in column 1 of the table to subsection (2) for the corresponding alphanumeric code in column 6(b) of Schedule 1, when that number is expressed in milliliters; and

(c) any of the dangerous goods in the outer means of containment,

(i) if solids, have a mass that is less than or equal to the number shown in column 2 of the table to subsection (2) for the corresponding alphanumeric code in column 6(b) of Schedule 1, when that number is expressed in grams,
(ii) if liquids, have a volume that is less than or equal to the number shown in column 2 of the table to subsection (2) for the corresponding alphanumeric code in column 6(b) of Schedule 1, when that number is expressed in milliliters, or

(iii) if gases, including a gas in a liquefied form, are contained in one or more means of containment each of which has a capacity of less than or equal to the number shown in column 2 of the table to subsection (2) for the corresponding alphanumeric code in column 6(b) of Schedule 1, when that number is expressed in milliliters.

(2) When dangerous goods in excepted quantities for which different alphanumeric codes are assigned are together in an outer means of containment, the total quantity of dangerous goods must not exceed the lowest maximum net quantity per outer means of containment that is set out in column 2 of the table to this subsection for any of the dangerous goods.

<table>
<thead>
<tr>
<th>Alphanumeric Code</th>
<th>Column 1</th>
<th>Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum net quantity per inner means of containment (in g for solids and mL for liquids and gases)</td>
<td>Maximum net quantity per outer means of containment (in g for solids and mL for liquids and gases, or sum of g and mL in the case of mixed packing)</td>
</tr>
<tr>
<td>E0</td>
<td>Not permitted as Excepted Quantity</td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>30</td>
<td>1000</td>
</tr>
<tr>
<td>E2</td>
<td>30</td>
<td>500</td>
</tr>
<tr>
<td>E3</td>
<td>30</td>
<td>300</td>
</tr>
<tr>
<td>E4</td>
<td>1</td>
<td>500</td>
</tr>
<tr>
<td>E5</td>
<td>1</td>
<td>300</td>
</tr>
</tbody>
</table>

(3) 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 (Reporting Requirements) do not apply to the handling, offering for transport or transporting of dangerous goods in excepted quantities if each means of containment is marked on one side, other than a side on which it is intended to rest or to be stacked during transport, with the excepted quantities mark illustrated below.
(4) When dangerous goods in excepted quantities are in a means of containment that is inside an overpack, the following information must be displayed on the overpack, unless that information is on the means of containment and is visible through the overpack:

(a) the word "Overpack"; and

(b) the mark illustrated in subsection (3).

(5) The number of outer means of containment containing dangerous goods in excepted quantities on a road vehicle, a railway vehicle or an intermodal container must not exceed 1 000.

(6) When dangerous goods in excepted quantities are in an inner means of containment that is inside an outer means of containment, the inner means of containment is not required to be marked in accordance with subsection (3) if

(a) the outer means of containment is not intended to be opened during transport; and

(b) the outer means of containment is marked, legibly and visibly on a contrasting background, with the mark illustrated in that subsection.

(7) If a shipping document or any other document accompanies dangerous goods in excepted quantities, the document must include the words “dangerous goods in excepted quantities” and must indicate the number of outer means of containment.

(8) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2, (Classification), do not apply to
the handling, offering for transport or transporting of dangerous goods in excepted quantities that are assigned to alphanumeric codes E1, E2, E4 and E5 in column 6(b) of Schedule 1 if

(a) the net quantity of the dangerous goods per inner means of containment is less than or equal to 1 g for solids or 1 mL for liquids and gases; and

(b) the net quantity of the dangerous goods per outer means of containment is less than or equal to 100 g for solids or 100 mL for liquids and gases.

**Example #1:**
The consignor wants to transport UN0105, FUSE, SAFETY, as an excepted quantity. The first step is to find UN0105 in Schedule 1 and look for the alphanumeric code in Column 6(b). Once we have the E0 code, we need to go back to subsection 1.17.1(2) to determine the quantity per inner and outer means of containment (MOC). As per the table in subsection (2), any UN number with the alphanumeric code E0 cannot use the Excepted Quantities Exemption.

**Example #2:**
If the consignor wants to transport UN1374, FISH MEAL, UNSTABILIZED, you will need to find the alphanumeric code for this UN number, which is E2.

The alphanumeric code E2 allows a maximum quantity of 30 g per inner MOC and a maximum of 500 g per outer MOC. The consignor can transport up to 1000 outer MOC on board his road vehicle as long as the outer MOC is marked legibly and visibly with the appropriate excepted quantity mark and the MOC 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.

![Table](image)

**Example #3:**
If you have dangerous goods with different alphanumeric codes, such as E3 and E4, you will notice that the maximum quantities per inner and outer means of containment are different. Each inner means of containment will need to respect the maximum quantity of dangerous goods for its appropriate alphanumerical code. The maximum quantity in the outer means of containment should not exceed the lowest quantity of the applicable alphanumerical code. In this example, the lowest quantity between E3 and E4 is 300. Therefore, 300 grams or milliliters is the maximum quantity allowed in the outer means of containment.