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PART 2

CLASSIFICATION

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CLASSIFICATION

Definitions

Definitions for the following terms, used in this Part, are provided in Part 1, Coming into Force, Repeal, Interpretation, General Provisions and Special Cases:

accidental release
carrier
Category A ***SOR/2008-34***
Category B ***SOR/2008-34***
class
classification
compatibility group
consignor
culture ***SOR/2008-34***
dangerous goods
dust
fire point
flash point
gas
ICAO Technical Instructions
IMDG Code
import
infectious substance
in transport
LC_{50}
LD_{50} (dermal)
LD_{50} (oral)
liquid
lithium content ***SOR/2014-306***
Manual of Tests and Criteria
means of containment
mist
offer for transport
packing group
primary class
public safety
railway vehicle
road vehicle
ship
shipping name
solid
subsidiary class
substance
technical name ***SOR/2014-152***
UN number
UN Recommendations
vapour
watt hour or Wh ***SOR/2014-306***

2.1 Determining When Substances Are Dangerous Goods

A substance is dangerous goods when

(a) it is listed by name in Schedule 1 and is in any form, state or concentration that meets the criteria in this Part for inclusion in at least one of the 9 classes of dangerous goods; or

(b) it is not listed by name in Schedule 1 but meets the criteria in this Part for inclusion in at least one of the 9 classes of dangerous goods.

2.2 Responsibility for Classification

The consignor is responsible for determining the classification of dangerous goods. This activity is normally done by, or in consultation with, a person who understands the nature of the dangerous goods such as a manufacturer, a person who formulates, blends or otherwise prepares mixtures or solutions of goods or, in the case of infectious substances, a doctor, scientist, veterinarian, epidemiologist, genetic engineer, microbiologist, pathologist, nurse, coroner or laboratory technologist or technician.

(1) Before allowing a carrier to take possession of dangerous goods for transport, the consignor must determine the classification of the dangerous goods in accordance with this Part.

(2) When importing dangerous goods into Canada, the consignor must ensure that they have the correct classification before they are transported in Canada.

(3) A consignor must use the following classifications:
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(a) for substances included in Class 1, Explosives, the classification determined in accordance with the "Explosives Act"; and
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(b) for radioactive materials, the classification determined in accordance with the "Packaging and Transport of Nuclear Substances Regulations".
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(c) ***Repealed*** ***SOR/2014-152***

(d) ***Repealed*** ***SOR/2014-152***

(3.1) For substances included in Class 6.2, Infectious Substances, a consignor may use a classification determined by the Public Health Agency of Canada or the Canadian Food Inspection Agency.
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(4) A consignor may use the appropriate classification in the ICAO Technical Instructions, the IMDG Code or the UN Recommendations to transport dangerous goods within Canada by a road vehicle, a railway vehicle or a ship on a domestic voyage if these Regulations or the document from which the classification is taken does not forbid their transport.

(5) If an error in classification is noticed or if there are reasonable grounds to suspect an error in classification, the consignor must not allow a carrier to take possession of the dangerous goods for transport until the classification has been verified or corrected.

(6) A carrier who notices an error in classification or has reasonable grounds to suspect an error in classification while the dangerous goods are in transport must advise the consignor and must stop transporting the dangerous goods until the consignor verifies or corrects the classification. The consignor must immediately verify or correct the classification and ensure that the carrier is provided with the verified or corrected classification.

When reading sections 2.3 to 2.6, it is useful to remember that the word "classification" is defined in Part 1, Coming Into Force, Repeal, Interpretation, General Provisions and Special Cases, and means, as applicable, the shipping name, the primary class, the compatibility group, the subsidiary class, the UN number, the packing group and the infectious substance category.

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2.2.1 Proof of Classification *SOR/2014-152*

(1) A consignor who allows a carrier to take possession of dangerous goods for transport or who imports dangerous goods into Canada must, during a five-year period that begins on the date that appears on the shipping document, make a proof of classification available to the Minister on reasonable notice given by the Minister.

(2) For the purposes of this section, a proof of classification is

(a) a test report;

(b) a lab report; or

(c) a document that explains how the dangerous goods were classified.

Figures 10.5 and 20.2 of the Manual of Tests and Criteria are examples of test reports.

A safety data sheet (SDS) is an acceptable proof of classification if it is accompanied by an explanation, under the heading "Transportation Information", that describes how the dangerous goods were classified.

(3) A proof of classification must include the following information:

(a) the date on which the dangerous goods were classified;

(b) if applicable, the technical name of the dangerous goods;

(c) the classification of the dangerous goods; and

(d) if applicable, the classification method used under this Part or under Chapter 2 of the UN Recommendations.

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2.3 Classifying Substances That Are Listed by Name in Schedule 1

If a name of dangerous goods is shown as a shipping name in column 2 of Schedule 1, that name must be used as the shipping name. That shipping name and the corresponding data for that shipping name in columns 1, 3 and 4 of Schedule 1 must be used as the classification of the dangerous goods.

For example, the name ACETONE is shown in column 2 of Schedule 1. ACETONE is the shipping name. The class, 3, is shown in column 3, the UN number, UN1090, is shown in column 1 and the packing group, II, is shown in column 4. Similarly, the name CHARGES, DEPTH, is shown in
column 2 of Schedule 1. CHARGES, DEPTH, is the shipping name. The class, 1.1D, is shown in column 3, the UN number, UN0056, is shown in column 1 and the packing group, II, is shown in column 4.

2.4 Classifying Substances That Are Included in Only One Class and One Packing Group

If, in accordance with the criteria and tests in this Part, a substance is included in only one class and one packing group, the substance is dangerous goods and the shipping name in column 2 of Schedule 1 that most precisely describes the dangerous goods and that is most consistent with the class and the packing group determined by the criteria and tests must be selected as the shipping name.
That shipping name and the corresponding data for that shipping name in columns 1, 3 and 4 of Schedule 1 must be used as the classification of the dangerous goods.

2.5 Classifying Substances That Are Included in More Than One Class or Packing Group

The word "potential" is used in paragraphs (a), (b) and (c) of this section because the final subsidiary class or classes and the final packing group are determined in accordance with paragraph (d).

If, in accordance with the criteria and tests in this Part, a substance meets the criteria for inclusion in more than one class or packing group, the substance is dangerous goods and its classification is determined in the following manner:

(a) the classes in which the dangerous goods are included are ranked in order of precedence in accordance with section 2.8 to determine the primary class and the potential subsidiary class or classes;

(b) the potential packing group is the one with the lowest roman numeral;

(c) the shipping name in column 2 of Schedule 1 that most precisely describes the dangerous goods and for which the corresponding data in columns 1, 3 and 4 are the most consistent with the primary class, the potential subsidiary class or classes and the potential packing group is selected; and
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(d) the shipping name and the corresponding data in columns 1, 3 and 4 of Schedule 1 are used as the classification of the dangerous goods.

2.5.1 Descriptive Text Following a Shipping Name
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When applying section 2.4 or 2.5, the descriptive text written in lower case letters following a shipping name must be used in determining the shipping name that most precisely describes the dangerous goods.
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2.6 Classifying a Mixture or Solution

A mixture or solution of substances that are not dangerous goods and one substance that is dangerous goods and that is listed by name in Schedule 1 has the classification shown for the dangerous goods in that Schedule if the mixture or solution is still dangerous goods in accordance with paragraph 2.1(a) and the mixture or solution is not identified by a shipping name in Schedule 1. However, if the classification for the dangerous goods does not precisely describe the mixture or solution but the mixture or solution meets the criteria in this Part for inclusion in at least one of the 9 classes of dangerous goods, then sections 2.4 and 2.5 must be used to determine its classification.

2.7 Marine Pollutants

A substance is a marine pollutant if

(a) the letter "P" (marine pollutant) is set out in column 4 of Schedule 3 for the substance; or
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(b) the substance meets the criteria for classification as a marine pollutant in accordance with section 2.9.3 or chapter 2.10 of the IMDG Code.
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(c) ***Repealed*** ***SOR/2014-306***

Marine pollutants are required to be identified on a shipping document referred to in Part 3 (Documentation) and on a means of containment referred to in Part 4 (Dangerous Goods Safety Marks).

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(2) ***Repealed*** ***SOR/2014-306***

(3) ***Repealed*** ***SOR/2014-306***

2.8 Precedence of Classes

(1) When dangerous goods meet the criteria for inclusion in more than one class but meet the criteria for inclusion in only one of the following classes, that one class is the primary class. The classes are

(a) Class 1, Explosives, except for the following dangerous goods for which Class 1 is a subsidiary class:

(i) UN3101, ORGANIC PEROXIDE TYPE B, LIQUID,

(ii) UN3102, ORGANIC PEROXIDE TYPE B, SOLID,

(iii) UN3111, ORGANIC PEROXIDE TYPE B, LIQUID, TEMPERATURE CONTROLLED,

(iv) UN3112, ORGANIC PEROXIDE TYPE B, SOLID, TEMPERATURE CONTROLLED,

(v) UN3221, SELF-REACTIVE LIQUID TYPE B,

(vi) UN3222, SELF-REACTIVE SOLID TYPE B,

(vii) UN3231, SELF-REACTIVE LIQUID TYPE B, TEMPERATURE CONTROLLED, and

(viii) UN3232, SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED;

(b) Class 2, Gases, and within this class, Class 2.3, Toxic Gases, takes precedence over Class 2.1, Flammable Gases, and Class 2.1, Flammable Gases, takes precedence over Class 2.2, Non-flammable and Non-toxic Gases;

(c) Class 4.1, Flammable Solids, desensitized explosives included in Packing Group I or self-reactive substances;

(d) Class 4.2, Substances Liable to Spontaneous Combustion, pyrophoric solids or liquids included in Packing Group I;

(e) Class 5.2, Organic Peroxides;

(f) Class 6.1, Toxic Substances, that are included in Packing Group I, due to inhalation toxicity;

(g) Class 6.2, Infectious Substances; and

(h) Class 7, Radioactive Materials.

If a substance meets the criteria for inclusion in more than one of the classes identified in subsection (1), the person doing the classification may seek assistance by contacting Transport Canada, Transport Dangerous Goods Directorate, through CANUTEC at 613-992-4624.

(2) Despite paragraph (1)(f), Class 8 is the primary class when a substance meets the criteria for inclusion in

(a) Class 8, Corrosives;

(b) Packing Group I due to inhalation toxicity of dusts or mists; and

(c) Packing Group III due to oral or dermal toxicity.

(3) A consignor must determine the order of precedence among classes that are not listed in subsection (1) in accordance with the following table, except that Class 6.1 takes precedence if a substance is a pesticide under the "Pesticide Act" and is included in Class 6.1, Packing Group III, and in Class 3, Packing Group III.

Example of How to Use the Precedence of Classes Table

Suppose that, after testing, it is found that a substance meets the criteria for inclusion in Class 3, Packing Group I, in Class 8 (L for liquid), Packing Group II, and in Class 6.1, Packing Group II, dermal toxicity. The potential packing group is Packing Group I because it has the lowest roman numeral (see paragraph 2.5(b)).

To determine the primary class, compare the classes two at a time. As the first combination, consider Class 3, Packing Group I, and Class 8, Packing Group II (L for liquid). Go to the table and find Class 3, Packing Group I, in the extreme left column. Follow that line across to the column on the right that refers to Class 8, Packing Group II (L for liquid). The class that takes precedence is the one at the point where the lines intersect in the column. In this combination Class 3 takes precedence over Class 8. Class 8 is set aside.

Class		4.2	4.3	5.1	5.1	5.1	6.1	6.1	6.1	6.1	8	8	8	8	8	8
Packing Group		All	All	I	II	III	I	I	II	III	I	I	II	II	III	III
	Code						D	O	X	X	L	S	L	S	L	S
3	I						3	3	3	3	3	-	3	-	3	-

Do the same thing with the combination of Class 3, Packing Group I, and Class 6.1, Packing Group II (D for dermal). In this combination Class 3 takes precedence. Class 6.1 is set aside, leaving Class 3 as the primary class.

Class		4.2	4.3	5.1	5.1	5.1	6.1	6.1	6.1	6.1	8	8	8	8	8	8
Packing Group		All	All	I	II	III	I	I	II	III	I	I	II	II	III	III
	Code						D	O	X	X	L	S	L	S	L	S
3	I						3	3	3	3	3	-	3	-	3	-

As there is no precedence between or among subsidiary classes, each of Class 6.1 and Class 8 is a potential subsidiary class.

Conclusion: In this example, the primary class is Class 3, each of Class 6.1 and Class 8 is a potential subsidiary class and the potential packing group is Packing Group I. The word "potential" is used here because the final subsidiary class or classes and the final packing group are determined in accordance with paragraph 2.5(d).

Table

Precedence of Classes

Class and Packing Group

Spaces in the table denote impossible combinations.

Class	Packing Group	Code	4.2	4.3	5.1	5.1	5.1	6.1	6.1	6.1	6.1	8	8	8	8	8	8
			All	All	I	II	III	I	I	II	III	I	I	II	II	III	III
								D	O	X	X	L	S	L	S	L	S
3	I							3	3	3	3	3		3		3	
3	II							3	3	3	3	8		3		3	
3	III							6.1	6.1	6.1	3	8		8		3	
4.1	II		4.2	4.3	5.1	4.1	4.1	6.1	6.1	4.1	4.1		8		4.1		4.1
4.1	III		4.2	4.3	5.1	4.1	4.1	6.1	6.1	6.1	4.1		8		8		4.1
4.2	II			4.3	5.1	4.2	4.2	6.1	6.1	4.2	4.2	8	8	4.2	4.2	4.2	4.2
4.2	III			4.3	5.1	5.1	4.2	6.1	6.1	6.1	4.2	8	8	8	8	4.2	4.2
4.3	I				5.1	4.3	4.3	6.1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4.3	II				5.1	4.3	4.3	6.1	4.3	4.3	4.3	8	8	4.3	4.3	4.3	4.3
4.3	III				5.1	5.1	4.3	6.1	6.1	6.1	4.3	8	8	8	8	4.3	4.3
5.1	I							5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
5.1	II							6.1	5.1	5.1	5.1	8	8	5.1	5.1	5.1	5.1
5.1	III							6.1	6.1	6.1	5.1	8	8	8	8	5.1	5.1
6.1	I	D										8	6.1	6.1	6.1	6.1	6.1
6.1	I	O										8	6.1	6.1	6.1	6.1	6.1
6.1	II	i										8	6.1	6.1	6.1	6.1	6.1
6.1	II	D										8	6.1	6.1	6.1	6.1	6.1
6.1	II	O										8	8	8	6.1	6.1	6.1
6.1	III	X										8	8	8	8	8	8

Code: D = dermal
O = oral
i = by inhalation
X = any route of exposure - D, O or i

State: L = liquid
S = solid

Class 1, Explosives

2.9 General

Substances are included in Class 1, Explosives, if they are

(a) capable, by chemical reaction, of producing gas at a temperature, pressure and speed that would damage the surroundings; or

(b) designed to produce an explosive or pyrotechnic effect by heat, light, sound, gas or smoke or a combination of those means as a result of non-detonative, self-sustaining exothermic chemical reactions.

2.10 Divisions

Class 1, Explosives, has six divisions:

(a) Class 1.1, mass explosion hazard;

(b) Class 1.2, projection hazard but not a mass explosion hazard;

(c) Class 1.3, fire hazard and either a minor blast hazard or a minor projection hazard or both but not a mass explosion hazard;

(d) Class 1.4, no significant hazard beyond the package in the event of ignition or initiation during transport;

(e) Class 1.5, very insensitive substances with a mass explosion hazard; and

(f) Class 1.6, extremely insensitive articles with no mass explosion hazard.

2.11 Compatibility Groups

Explosives are divided into 13 compatibility groups as described in Appendix 2, Description of Compatibility Groups, Class 1, Explosives, to this Part.

Compatibility groups are used to determine which explosives may be transported together. See section 5.7 of Part 5, Means of Containment.

2.12 Packing Groups

Explosives are included in Packing Group II.

Class 2, Gases

2.13 General

A substance is included in Class 2, Gases, if it is

(a) a gas included in one of the three divisions set out in section 2.14;
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(b) a mixture of gases;

(c) a mixture of one or more gases with one or more vapours of substances included in other classes;

(d) an article charged with a gas;

(e) tellurium hexafluoride; or

(f) an aerosol.

2.14 Divisions

Class 2, Gases, has three divisions:

(a) Class 2.1, Flammable Gases, which consists of gases that, at 20°C and an absolute pressure of 101.3 kPa,

(i) are ignitable when in a mixture of 13 per cent or less by volume with air, or

(ii) have a flammability range with air of at least 12 percentage points determined in accordance with tests or calculations in ISO 10156;

(b) Class 2.2, Non-flammable and Non-toxic Gases, which consists of gases that are transported at an absolute pressure greater than or equal to 280 kPa at 20°C, or as refrigerated liquids, and that are not included in Class 2.1, Flammable Gases, or Class 2.3, Toxic Gases; and

(c) Class 2.3, Toxic Gases, which consists of gases that

(i) are known to be toxic or corrosive to humans according to CGA P-20, ISO Standard 10298 or other documentary evidence published in technical journals or government publications, or

(ii) have an LC_{50} value less than or equal to 5 000 mL/m^3.

2.14.1 Aerosols *SOR/2014-306*

(1) Dangerous goods contained in an aerosol container must be transported under UN1950, AEROSOLS.

(2) The dangerous goods are included

(a) in Class 2.1, Flammable Gases, if the dangerous goods contain at least 85 per cent by mass of flammable components and the chemical heat of combustion is greater than or equal to 30 kJ/g; or

(b) in Class 2.2, Non-flammable and Non-toxic Gases, if the dangerous goods contain not more than 1 per cent by mass of flammable components and the heat of combustion is less than 20 kJ/g.

(3) The dangerous goods must be classified in accordance with section 31 of Part III of the Manual of Tests and Criteria.

(4) The dangerous goods must not contain gases included in Class 2.3, Toxic Gases.

(5) The dangerous goods must have a subsidiary class of 6.1, Toxic Substances, or Class 8, Corrosive Substances, if the dangerous goods – other than the propellant to be ejected from the aerosol container – are included in Class 6.1, Toxic Substances, Packing Groups II or III, or Class 8, Corrosive Substances, Packing Groups II or III.

(6) The dangerous goods are forbidden for transport when they are included in Packing Group I for toxicity or corrosiveness.

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2.14.2 Exemption *SOR/2014-306*

(1) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2, (Classification), do not apply to gases included in Class 2.2, Non-flammable and Non-toxic Gases that are contained

(a) in foodstuffs, including carbonated beverages other than UN1950;

(b) in balls intended for use in sports;

(c) in tires; or

(d) in light bulbs.

(2) The exemption set out in paragraph (1)(d) applies only if the light bulbs are packaged so that any pieces of a ruptured bulb are contained by the packaging.

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2.15 Packing Groups

There are no packing groups for Class 2, Gases.

2.16 Determination of LC_{50}

LC_{50} values for a single or pure gas or for a mixture of gases must be determined

(a) by using LC_{50} values published in CGA P-20, ISO Standard 10298, technical journals or government publications;

(b) in accordance with paragraphs 2.2.3(b) and (c) of Chapter 2.2 of the UN Recommendations; or

(c) for a mixture of gases, in accordance with section 2.17.

2.17 Determination of LC_{50} of a Mixture of Gases

This section provides a method for making an acceptable approximation of the LC_{50} of a mixture of gases. The methods in paragraphs 2.16(a) and (b) are more exact.

To determine the LC_{50} of a mixture of gases when the LC_{50} of each of the gases is known, use 5 000 mL/m^3 as the toxic limit and,

(a) if the mixture contains only one gas with an LC_{50} less than or equal to the toxic limit (called "Gas A"), use the following calculation:

$$LC_{50} \text{ of the mixture} = \frac{LC_{50} \text{ of Gas A}}{\text{fraction by volume of Gas A in the mixture}}$$

or

(b) if the mixture contains more than one gas with an LC_{50} less than or equal to the toxic limit (called "Gas A", "Gas B", etc.),

(i) determine the contributing number (CN) of each of the gases with an LC_{50} less than or equal to the toxic limit using the formula

$$\text{CN Gas A} = \frac{LC_{50} \text{ of Gas A}}{\text{fraction by volume of Gas A in the mixture}}$$

(ii) combine the contributing numbers (CN) of each gas with an LC_{50} less than or equal to the toxic limit using the formula

$$T = \frac{1}{\text{CN Gas A}} + \frac{1}{\text{CN Gas B}} + \text{(as needed)}$$

and

(iii) obtain the LC_{50} of the mixture by dividing 1 by the number T (LC_{50} of the mixture = 1 / T).

Class 3, Flammable Liquids

2.18 General

(1) Substances that are liquids or liquids containing solids in solution or suspension are included in Class 3, Flammable Liquids, if they

(a) have a flash point less than or equal to 60ºC using the closed-cup test method referred to in Chapter 2.3 of the UN Recommendations; or

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A flash point of 65.6°C, using the open-cup test method referred to in Chapter 2.3 of the UN Recommendations, is equivalent to 60°C using the closed-cup test.

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(b) are intended or expected to be at a temperature that is greater than or equal to their flash point at any time while the substances are in transport.

The UN number and shipping name for the dangerous goods referred to in paragraph (b) are UN3256, ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S.

(2) Despite paragraph (1)(a), liquids that have a flash point greater than 35°C are not included in Class 3, Flammable Liquids, if they

(a) do not sustain combustion, as determined in accordance with the sustained combustibility test referred to in section 2.3.1.3 of Chapter 2.3 of the UN Recommendations;

(b) have a fire point greater than 100°C, as determined in accordance with ISO 2592; or

(c) are water-miscible solutions with a water content greater than 90 per cent by mass.

2.19 Packing Groups

(1) Flammable liquids included in Class 3, Flammable Liquids, are included in one of the following packing groups:

(a) Packing Group I, if they have an initial boiling point of 35°C or less at an absolute pressure of 101.3 kPa and any flash point;

(b) Packing Group II, if they have an initial boiling point greater than 35°C at an absolute pressure of 101.3 kPa and a flash point less than 23°C; or

(c) Packing Group III, if the criteria for inclusion in Packing Group I or II are not met.

(2) Despite subsection (1), for dangerous goods included in Class 3, Flammable Liquids,

(a) when the packing group is unknown, the consignor may include the dangerous goods in Packing Group I; or

(b) when the packing group is reasonably believed or is known to be Packing Group II or III, the consignor may include the dangerous goods in Packing Group II but, if the substance has the same characteristics as UN1203, GASOLINE, it may also be transported as Packing Group II.

(3) Despite paragraph (1)(b), a viscous substance that has an initial boiling point greater than 35°C at an absolute pressure of 101.3 kPa and a flash point less than 23°C may be included in Packing Group III if

(a) the substance or any separated solvent does not meet the criteria for inclusion in Class 6.1 or Class 8;

(b) the substance meets the Packing Group III criteria of the solvent separation test in section 32.5.1 of Part III of the Manual of Tests and Criteria; and

(c) the substance

(i) has been tested in accordance with either ASTM D 1200 or ISO 2431, and

(ii) has a kinematic viscosity, measured as flow time, that is within the range shown in column 3 of the following table, using a jet with the diameter shown in column 2 for the corresponding flash point in column 1.

Table

Column 1 Flash point (FP) in °C (closed cup)	Column 2 Jet diameter in mm	Column 3 Flow time (t) in seconds
> 17	4	20 < t ≤ 60
> 10	4	60 < t ≤ 100
> 5	6	20 < t ≤ 32
> -1	6	32 < t ≤ 44
> -5	6	44 < t ≤ 100
≤ -5	6	100 < t

Class 4, Flammable Solids; Substances Liable to Spontaneous Combustion; Substances That on Contact with Water Emit Flammable Gases (Water-reactive Substances)

2.20 General

Substances are included in Class 4 if they are flammable solids, substances liable to spontaneous combustion or substances that on contact with water emit flammable gases (water-reactive substances) and meet the criteria for inclusion in one of the divisions and packing groups of
Class 4.

2.21 Divisions

Class 4 has three divisions:

(a) Class 4.1, Flammable Solids, which consists of substances that are

(i) readily combustible, as determined in accordance with section 2.4.2.2 of Chapter 2.4 of the UN Recommendations,

(ii) under normal conditions of transport, liable to cause fire through friction,

(iii) solid desensitized explosives, which are solid explosives desensitized through wetting with water or alcohols or diluted with other substances to form a homogeneous solid mixture to suppress their explosive properties so that they are not included in Class 1, Explosives,

Substances that have one of the following UN numbers meet the criterion in subparagraph (iii): UN1310, UN1320, UN1321, UN1322, UN1336, UN1337, UN1344, UN1347, UN1348, UN1349, UN1354, UN1355, UN1356, UN1357, UN1517, UN1571, UN2555, UN2556, UN2557, UN2852, UN2907, UN3270, UN3319, UN3344.

(iv) self-reactive substances that are liable to undergo a strongly exothermic decomposition even without the participation of oxygen (air), as determined in accordance with section 2.4.2.3 of Chapter 2.4 of the UN Recommendations, but Class 4.1 does not include substances that have

(A) a primary class of Class 1, Explosives, Class 5.1, Oxidizing Substances, or Class 5.2, Organic Peroxides,

(B) a heat of decomposition less than 300 J/g, or

(C) a self-accelerating decomposition temperature (SADT) that is greater than 75°C for a 50 kg means of containment, as determined in accordance with section 2.4.2.3.4 of Chapter 2.4 of the UN Recommendations,

(v) identified by one of the following UN numbers: UN2956, UN3241, UN3242 or UN3251, or

(vi) are in the list of currently assigned self-reactive substances in section 2.4.2.3.2.3 of Chapter 2.4 of the UN Recommendations;

(b) Class 4.2, Substances Liable to Spontaneous Combustion, which consists of

(i) pyrophoric substances that spontaneously ignite within 5 minutes after coming into contact with air, as determined in accordance with section 2.4.3.2 of Chapter 2.4 of the UN Recommendations, and

(ii) self-heating substances that, when in large amounts (kilograms), spontaneously ignite on contact with air after long periods (hours or days), as determined in accordance with section 2.4.3.2 of Chapter 2.4 of the UN Recommendations; and

(c) Class 4.3, Water-reactive Substances, which consists of substances that, in tests performed in accordance with section 2.4.4.2 of Chapter 2.4 of the UN Recommendations, emit a flammable gas at a rate greater than 1 L/kg of substance per hour or spontaneously ignite at any step in the test procedure.

2.22 Packing Groups

(1) Substances included in Class 4.1, Flammable Solids, are included in one of the following packing groups:

(a) Packing Group I, if the substances meet the criterion in subparagraph 2.21(a)(iii), except that substances that have one of the following UN numbers are included in Packing Group II: UN2555, UN2556, UN2557, UN2907, UN3270, UN3319 or UN3344;

(b) Packing Group II, if

(i) the substances meet the criteria for inclusion in Class 4.1 in subparagraph 2.21(a)(iv) or (v), except that substances that have one of the following UN numbers are included in Packing Group III: UN2956, UN3241 or UN3251,

(ii) in tests referred to in section 33.2.1 of Part III of the Manual of Tests and Criteria for readily combustible solids, excluding metal powders, the burning time of the substances is less than 45 seconds and the flame passes the wetted zone, or

(iii) in tests referred to in section 33.2.1 of Part III of the Manual of Tests and Criteria, for readily combustible solids that are powders of metals or metal alloys, the zone of reaction of the substances spreads over the whole length of the sample in 5 minutes or less; or

(c) Packing Group III, if

(i) in tests referred to in section 33.2.1 of Part III of the Manual of Tests and Criteria, for readily combustible solids, excluding metal powders, the burning time of the substances is less than 45 seconds and the wetted zone stops the flame propagation for at least 4 minutes,

(ii) in tests referred to in section 33.2.1 of Part III of the Manual of Tests and Criteria, for readily combustible solids that are powders of metals or metal alloys, the zone of reaction of the substances spreads over the whole length of the sample in more than 5 minutes but not more than 10 minutes, or

(iii) the substances are solids that are liable to cause fire through friction.

(2) Substances included in Class 4.2, Substances Liable to Spontaneous Combustion, are included in one of the following packing groups:

(a) Packing Group I, if the substances are pyrophoric solids or liquids;

(b) Packing Group II, if the substances are self-heating substances that give a positive result, as determined in accordance with section 2.4.3.2 of Chapter 2.4 of the UN Recommendations using a 25 mm sample cube at 140°C; or

(c) Packing Group III for all other substances.

(3) Substances included in Class 4.3, Water-reactive Substances, are included in one of the following packing groups:

(a) Packing Group I, if the substances

(i) react vigorously with water at ambient temperatures and demonstrate a tendency for the gas produced to ignite spontaneously, or

(ii) react readily with water at ambient temperatures so that the rate of evolution of flammable gas is greater than or equal to 10 L/kg of substance over any one minute;

(b) Packing Group II, if

(i) the substances react readily with water at ambient temperatures so that the rate of evolution of flammable gas is greater than or equal to 20 L/kg of substance per hour, and

(ii) the criteria for inclusion in Packing Group I are not met; or

(c) Packing Group III, if

(i) the substances react slowly with water at ambient temperatures so that the rate of evolution of flammable gas is greater than or equal to 1 L/kg of substance per hour, and

(ii) the criteria for inclusion in Packing Group I or II are not met.

Class 5, Oxidizing Substances and Organic Peroxides

2.23 General

Substances are included in Class 5 if they are oxidizing substances or organic peroxides and meet the criteria for inclusion in one of the divisions of Class 5.

2.24 Divisions

Class 5 has two divisions:

(a) Class 5.1, Oxidizing Substances, which consists of substances that yield oxygen thereby causing or contributing to the combustion of other material, as determined in accordance with section 2.5.2 of Chapter 2.5 of the UN Recommendations; and

(b) Class 5.2, Organic Peroxides, which consists of substances that

(i) are thermally unstable organic compounds that contain oxygen in the bivalent "-O-O-" structure, as determined in accordance with section 2.5.3 of Chapter 2.5 of the UN Recommendations,

(ii) are liable to undergo exothermic self-accelerating decomposition,

(iii) have one or more of the following characteristics:

(A) they are liable to explosive decomposition,

(B) they burn rapidly,

(C) they are sensitive to impact or friction,

(D) they react dangerously with other substances, or

(E) they cause damage to the eyes, or

(iv) are in the list of currently assigned organic peroxides in section 2.5.3.2.4 of Chapter 2.5 of the UN Recommentations.

2.25 Packing Groups

(1) The determination of packing groups for Class 5.1, Oxidizing Substances, must be made

(a) for solids, using a test sample of a 4:1 or 1:1 mixture of substance and cellulose by mass, prepared and tested in accordance with section 2.5.2.2 of Chapter 2.5 of the UN Recommendations; or

(b) for liquids, using a test sample of a 1:1 mixture of substance and cellulose by mass, prepared and tested in accordance with section 2.5.2.3 of Chapter 2.5 of the UN Recommendations.

(2) Substances included in Class 5.1, Oxidizing Substances, are included in one of the following packing groups:

(a) for solids,

(i) Packing Group I, if the test sample exhibits an average burning time less than the mean burning time of a 3:2 mixture by mass of potassium bromate and cellulose,

(ii) Packing Group II, if the test sample exhibits an average burning time less than or equal to the mean burning time of a 2:3 mixture by mass of potassium bromate and cellulose and the criteria for inclusion in Packing Group I are not met, or

(iii) Packing Group III, if the test sample exhibits an average burning time less than or equal to the mean burning time of a 3:7 mixture by mass of potassium bromate and cellulose and the criteria for inclusion in Packing Group I or II are not met; or

(b) for liquids,

(i) Packing Group I, if the substance in a 1:1 mixture by mass of substance and cellulose spontaneously ignites or the mean pressure rise time is less than or equal to that of a 1:1 mixture by mass of 50 percent perchloric acid and cellulose,

(ii) Packing Group II, if the mean pressure rise time is less than or equal to the mean pressure rise time of a 1:1 mixture by mass of 40 per cent aqueous sodium chlorate solution and cellulose and the criteria for inclusion in Packing Group I are not met, or

(iii) Packing Group III, if the mean pressure rise time is less than or equal to the mean pressure rise time of a 1:1 mixture by mass of 65 per cent aqueous nitric acid solution and cellulose and the criteria for inclusion in Packing Group I or II are not met.

(3) Class 5.2, Organic Peroxides, are included in Packing Group II.

(4) The type, B to F, of organic peroxides must be determined in accordance with section 2.5.3.3 of Chapter 2.5 of the UN Recommendations.

Class 6, Toxic and Infectious Substances

2.26 General

Substances are included in Class 6 if they are

(a) liable to cause death or serious injury or to harm human health if swallowed or inhaled or if they come into contact with human skin; or

(b) infectious substances.

2.27 Divisions

Class 6 has two divisions:

(a) Class 6.1, Toxic Substances, which consists of substances that are liable to cause death or serious injury or to harm human health if swallowed or inhaled or if they come into contact with human skin; and

(b) Class 6.2, Infectious Substances, which consists of infectious substances.

2.28 Criteria for Inclusion in Class 6.1, Toxic Substances

Substances included in Class 6.1, Toxic Substances, are grouped by oral toxicity, dermal toxicity and inhalation toxicity by dust, mist or vapour. Toxicity by inhalation of a gas is covered in Class 2.3, Toxic Gases.

A substance is included in Class 6.1

(a) due to oral toxicity if its LD_{50} (oral) is less than or equal to 300 mg/kg;
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(b) due to dermal toxicity if its LD_{50} (dermal) is less than or equal to 1 000 mg/kg; or

(c) due to inhalation toxicity

(i) by dust or mist if dust or mist is likely to be produced in a transport accident and its LC_{50} (inhalation) is less than or equal to 4 mg/L, or
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(ii) by vapour if its LC_{50} (inhalation) is less than or equal to 5 000 mL/m^3.

2.29 Packing Groups

(1) When a substance is known to be included in Class 6.1 and that knowledge is based on documentary evidence published in technical journals or government publications and testing is not done to determine the packing group, the substance must be included in Packing Group I.

(2) Substances that are included in Class 6.1 due to

(a) oral toxicity are included in one of the following packing groups:

(i) Packing Group I, if the LD_{50} (oral) is less than or equal to 5 mg/kg,

(ii) Packing Group II, if the LD_{50} (oral) is greater than 5 mg/kg but less than or equal to 50 mg/kg, or

(iii) Packing Group III, if the LD_{50} (oral) is greater than 50 mg/kg but less than or equal to 300 mg/kg;
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(b) dermal toxicity are included in one of the following packing groups:

(i) Packing Group I if the LD_{50} (dermal) is less than or equal to 50 mg/kg,

(ii) Packing Group II if the LD_{50} (dermal) is greater than 50 mg/kg but less than or equal to 200 mg/kg, or

(iii) Packing Group III if the LD_{50} (dermal) is greater than 200 mg/kg but less than or equal to 1 000 mg/kg;

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(c) inhalation toxicity by dust or mist are included in one of the following packing groups:

(i) Packing Group I if the LC_{50} (inhalation) is less than or equal to 0.2 mg/L,
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(ii) Packing Group II if the LC_{50} (inhalation) is greater than 0.2 mg/L but less than or equal to 2 mg/L, or

(iii) Packing Group III if the LC_{50} (inhalation) is greater than 2 mg/L but less than or equal to 4 mg/L; or

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(d) inhalation toxicity by vapour are included in one of the following packing groups, where "V" is the saturated vapour concentration in millilitres per cubic metre of air at 20°C and at 101.3 kPa:

(i) Packing Group I, if

(A) V is greater than or equal to 10 multiplied by the LC_{50}, and

(B) the LC_{50} is less than or equal to 1 000 mL/m^3,

(ii) Packing Group II, if

(A) V is greater than or equal to the LC_{50},

(B) the LC_{50} is less than or equal to 3 000 mL/m^3, and

(C) the criteria for Packing Group I are not met, or

(iii) Packing Group III, if

(A) V is greater than or equal to 0.2 multiplied by the LC_{50},

(B) the LC_{50} is less than or equal to 5 000 mL/m^3, and

(C) the criteria for inclusion in Packing Group I or II are not met.

2.30 Determination of LD_{50} (oral or dermal)

LD_{50} (oral or dermal) values for solid or liquid substances or for a mixture of solid or liquid substances must be determined

(a) by using the LD_{50} values published in technical journals or in government publications;

(b) in accordance with section 2.6.2.3 of Chapter 2.6 of the UN Recommendations; or

(c) for a mixture of solid or liquid substances, in accordance with section 2.31.

2.31 Determination of LD_{50} (oral or dermal) of a Mixture of Substances

This section provides a method for making an acceptable approximation of the LD_{50} of a mixture of solid or liquid substances. The methods in paragraphs 2.30(a) and (b) are more exact.

To determine the LD_{50} of a mixture of solid or liquid substances when the LD_{50} of each of the substances is known, use 1 000 mg/kg as the toxic limit and

(a) if the mixture contains only one substance with an LD_{50} less than or equal to the toxic limit (called "Substance A"), use the following calculation:

$$LD_{50} \text{ of the mixture} = \frac{LD_{50} \text{ of Substance A}}{\text{fraction by mass of Substance A in the mixture}}$$

or

(b) if the mixture contains more than one substance with an LD_{50} less than or equal to the toxic limit (called "Substance A", "Substance B", etc.),

(i) determine the lowest LD_{50} of all substances, assign that LD_{50} to all substances whose actual LD_{50} is less than or equal to the toxic limit, then use the calculation in paragraph (a) using that assigned LD_{50} and taking as the mass of Substance A in the formula the total of the masses of all substances whose actual LD_{50} is less than or equal to the toxic limit, or

(ii) use the following calculations:

(A) determine the contributing number (CN) of each of the substances with an LD_{50} less than or equal to the toxic limit using the formula

$$\text{CN for Substance A} = \frac{LD_{50} \text{ of Substance A}}{\text{fraction by mass of Substance A in the mixture}}$$

(B) combine the contributing numbers (CN) of each substance with an LD_{50} less than or equal to the toxic limit as

$$T = \frac{1}{\text{CN Substance A}} + \frac{1}{\text{CN Substance B}} + \text{(as needed)}$$

and

(C) obtain the LD_{50} of the mixture by dividing 1 by the number T (LD_{50} of the mixture = 1 / T).

2.32 Determination of LC_{50} (dust, mist or vapour)

LC_{50} values for a substance in the form of a dust, mist or vapour or for a mixture of substances in the form of a dust, mist or vapour must be determined

(a) by using the LC_{50} values published in technical journals or in government publications;

(b) in accordance with sections 2.6.2.2.4.2 to 2.6.2.2.4.7 of Chapter 2.6 of the UN Recommendations; or

(c) for a mixture of substances, in accordance with section 2.33.

2.33 Determination of LC_{50} (dust, mist or vapour) of a Mixture of Substances

This section provides a method for making an acceptable approximation of the LC_{50} of a mixture of substances. The methods in paragraphs 2.32(a) and (b) are more exact.
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To determine the LC_{50} of a mixture of substances that are in the form of a dust, mist or vapour, when the LC_{50} of each of the substances is known, make the determination in accordance with section 2.17, except that for a dust use 10 mg/L as the toxic limit and for a mist use 2 mg/L as the toxic limit. For a substance in the form of vapour the toxic limit is the same as for a gas, which is 5 000 mL/m^3.

2.34 Determination of the Packing Group of a Mixture of Liquids with an Inhalation Toxicity by Vapour

(1) The first step in determining the packing group of a mixture of liquids with an inhalation toxicity by vapour when one or more of the substances has an LC_{50} (vapour) less than or equal to 5 000 mL/m^3, and the LC_{50} of each substance is known, is to determine the following data:

(a) determine the LC_{50} (vapour) for the mixture in accordance with section 2.33;

(b) where P_i is the vapour pressure of the i^{th} substance in kPa at 20°C and an absolute pressure of 101.3 kPa, determine the volatility, V_i, of each substance in the mixture as

$V_i = P_i$ multiplied by 10^6 then divided by 101.3;

(c) determine the ratio of the volatility of a substance to its LC_{50} for each substance with an LC_{50} less than or equal to 5 000 mL/m^3 as

$R_i = V_i$ divided by the LC_{50} of the i^{th} substance;

and

(d) set R equal to the sum of the R_i for each of the substances with an LC_{50} less than or equal to 5 000 mL/m^3 as

$R = R_1 + R_2 + \ldots +$ (as needed).

(2) Using the data determined in accordance with subsection (1), the mixture is included in one of the following packing groups:

(a) Packing Group I, if

(i) R is greater than or equal to 10, and

(ii) the LC_{50} (mixture) is less than or equal to 1 000 mL/m^3;

(b) Packing Group II, if

(i) R is greater than or equal to 1,

(ii) the LC_{50} (mixture) is less than or equal to 3 000 mL/m^3, and

(iii) the criteria for inclusion in Packing Group I are not met; or

(c) Packing Group III, if

(i) R is greater than or equal to 0.2,

(ii) the LC_{50} (mixture) is less than or equal to 5 000 mL/m^3, and

(iii) the criteria for inclusion in Packing Group I or II are not met.

2.35 Determination of the Packing Group of a Mixture of Liquids with an Inhalation Toxicity and an Unknown LC_{50}

This section provides a method of directly determining the packing group of a mixture of liquids that has an inhalation toxicity without requiring that the exact LC_{50} be found.

(1) A mixture of liquids with an inhalation toxicity and an unknown LC_{50} is included in Packing Group I if it meets the following criteria:

(a) when a sample of the mixture is vapourized and diluted with air to create a test atmosphere of 1 000 mL/m^3 and 10 young adult albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days, the result is the death of 5 or more of the animals within the 14-day observation period; and

(b) when a sample of the vapour in equilibrium with the mixture at 20°C is diluted with 9 equal volumes of air to form a test atmosphere and 10 young adult albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days, the result is the death of 5 or more of the animals within the 14-day observation period.

In this case the mixture is presumed to have an LC_{50} less than or equal to 1 000 mL/m^3 and a volatility greater than or equal to 10 times the mixture's LC_{50}.

(2) A mixture of liquids with an inhalation toxicity and an unknown LC_{50} is included in Packing Group II if it meets the following criteria and the criteria for inclusion in Packing Group I are not met:

(a) when a sample of the mixture is vapourized and diluted with air to create a test atmosphere of 3 000 mL/m^3 and 10 young adult albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days, the result is the death of 5 or more of the animals within the 14-day observation period; and

(b) when a sample of the vapour in equilibrium with the mixture at 20°C is used to form a test atmosphere and 10 young adult albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days, the result is the death of 5 or more of the animals within the 14-day observation period.

In this case the mixture is presumed to have an LC_{50} less than or equal to 3 000 mL/m^3 and a volatility greater than or equal to the mixture's LC_{50}.

(3) A mixture of liquids with an inhalation toxicity and an unknown LC_{50} is included in Packing Group III if it meets the following criteria and the criteria for inclusion in Packing Group I or II are not met:

(a) when a sample of the mixture is vapourized and diluted with air to create a test atmosphere of 5 000 mL/m^3 and 10 young adult albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days, the result is the death of 5 or more of the animals within the 14-day observation period; and

(b) when the vapour pressure of the mixture is measured, the vapour concentration is greater than or equal to 1 000 mL/m^3.

In this case the mixture is presumed to have an LC_{50} less than or equal to 5 000 mL/m^3 and a volatility greater than or equal to 0.2 times the mixture's LC_{50}.

(4) If only LC_{50} data relating to 4-hour exposures to dust or mist are available, those figures can be multiplied by 4 and the result taken as the LC_{50} data for 1 hour, that is LC_{50} 4 hours (dust or mist) multiplied by 4 is equivalent to LC_{50} 1 hour.

(5) If only LC_{50} data relating to 4-hour exposures to vapour are available, those figures can be multiplied by 2 and the result taken as the LC_{50} data for 1 hour, that is LC_{50} 4 hours (vapour) multiplied by 2 is equivalent to LC_{50} 1 hour.

2.36 Infectious Substances

Assistance for classifying infectious substances may be obtained from the Director, Office of Laboratory Security, Public Health Agency of Canada, or from the Director, Biohazard Containment and Safety, Canadian Food Inspection Agency.
SOR/2008-34

An infectious substance is defined in Part 1, Coming into Force, Repeal, Interpretation, General Provisions and Special Cases, as "a substance known or reasonably believed to contain viable micro-organisms such as bacteria, viruses, rickettsia, parasites, fungi and other agents such as prions that are known or reasonably believed to cause disease in humans or animals and that are listed in Appendix 3 to Part 2, Classification, or that exhibit characteristics similar to a substance listed in Appendix 3".
SOR/2008-34

(1) Substances are included in Class 6.2, Category A or Category B if they are infectious substances and are listed in Appendix 3 to this Part or exhibit characteristics similar to a substance listed in that appendix.
SOR/2008-34

(2) Infectious substances that are included in Category A and that are in a form other than a culture may be handled, offered for transport or transported as Category B in accordance with the conditions set out in paragraphs 1.39(a) to (c) of Part 1, Coming into Force, Repeal, Interpretation, General Provisions and Special Cases.
SOR/2008-34

(3) Despite subsection (2), the following infectious substances included in Category A, and any substance that exhibits characteristics similar to these substances, must always be handled, offered for transport or transported as Category A:

(a) Crimean-Congo Hemorrhagic fever virus;

(b) Ebola virus;

(c) Flexal virus;

(d) Guanarito virus;

(e) Hantaviruses causing hemorrhagic fever with renal syndrome;

(f) Hantaviruses causing pulmonary syndrome;

(g) Hendra virus;

(h) Herpes B virus (Cercopithecine Herpesvirus-1);

(i) Junin virus;

(j) Kyasanur Forest virus;

(k) Lassa virus;

(l) Machupo virus;

(m) Marburg virus;

(n) Monkeypox virus;

(o) Nipah virus;

(p) Omsk hemorrhagic fever virus;

(q) Russian Spring – Summer encephalitis virus;

(r) Sabia virus; and

(s) Variola (smallpox virus).

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2.36.1 Medical or Clinical Waste *SOR/2014-306*

Dangerous goods that are medical or clinical waste must be classified

(a) under UN2814 or, as applicable, under UN2900, if they contain Category A infectious substances;

(b) under UN3291, if they contain Category B infectious substances; or

(c) under UN3291, if the shipper has reasonable grounds to believe that they have a low probability of containing infectious substances.
SOR/2016-95

For the classification of medical or clinical wastes, international, national or provincial reference catalogues may be taken into account.

Note: The shipping name for UN3291 is "CLINICAL WASTE, UNSPECIFIED, N.O.S." or "(BIO)MEDICAL WASTE, N.O.S." or "REGULATED MEDICAL WASTE, N.O.S."

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Class 7, Radioactive Materials

2.37 General

Substances defined as Class 7, Radioactive Materials in the Packaging and Transport of Nuclear Substances Regulations are included in Class 7, Radioactive Materials.

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In these Regulations, the words "Class 7, Radioactive Materials" are used rather than the words that are used in the schedule to the Act, "Class 7, Nuclear Substances, within the meaning of the 'Nuclear Safety and Control Act', that are radioactive so that the Regulations are more easily read in conjunction with international documents incorporated by reference in them.

SOR/2008-34

2.38 Divisions

There are no divisions for Class 7.

2.39 Packing Groups

There are no packing groups for Class 7.

Class 8, Corrosives

2.40 General

Substances are included in Class 8, Corrosives, if they

(a) are known to cause full thickness destruction of human skin, that is, skin lesions that are permanent and destroy all layers of the outer skin through to the internal tissues;

(b) cause full thickness skin destruction, as determined in accordance with OECD Guidelines 430 or OECD Guidelines 431; or
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(c) do not cause full thickness destruction of skin, but exhibit a corrosion rate that exceeds 6.25 mm per year at a test temperature of 55°C, as determined in accordance with the ASTM Corrosion Test.

2.41 Divisions

There are no divisions for Class 8.

2.42 Packing Groups

(1) If a substance is known to be included in Class 8, Corrosives, and that knowledge is based on documentary evidence published in technical journals or government publications and testing is not done to determine the packing group, the substance must be included in Packing Group I.

(2) Class 8, Corrosives, are included in one of the following packing groups:

(a) Packing Group I, if

(i) they are known to cause full thickness destruction of human skin, that is, skin lesions that are permanent and that destroy all layers of the outer skin through to the internal tissues, or

(ii) full thickness destruction of intact skin tissue occurs within an observation period of 60 minutes after an exposure time of 3 minutes or less, as determined in accordance with OECD Guidelines 404 or OECD Guidelines 435;
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(b) Packing Group II, if full thickness destruction of skin occurs within an observation period of 14 days after an exposure time of more than 3 minutes but not more than 60 minutes, as determined in accordance with OECD Guidelines 404 or OECD Guidelines 435; or
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(c) Packing Group III, if

(i) full thickness destruction of intact skin tissue occurs within an observation period of 14 days after an exposure time of more than 60 minutes but not more than 4 hours, as determined in accordance with OECD Guidelines 404 or OECD Guidelines 435, or
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(ii) they exhibit a corrosion rate that exceeds 6.25 mm per year at a test temperature of 55°C on steel or aluminum surfaces as determined in accordance with subparagraph 2.8.2.5(c)(ii) of the UN Recommendations.
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Table

Packing Group	*Exposure Time*	*Observation Period*	*Effect*
I	*≤ 3 minutes*	*≤ 60 minutes*	*Full thickness destruction of intact skin*
II	*> 3 minutes ≤ 1 h*	*≤ 14 days*	*Full thickness destruction of intact skin*
III	*> 1 h ≤ 4 h*	*≤ 14 days*	*Full thickness destruction of intact skin*
III	-	-	*Corrosion rate that exceeds 6.25 mm a year on either steel or aluminum surfaces at a test temperature of 55°C when tested on both materials*

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(3) An in vitro test may be used instead of the test in the OECD Guidelines**.**

Class 9, Miscellaneous Products, Substances or Organisms

2.43 General

A substance is included in Class 9, Miscellaneous Products, Substances or Organisms, if it

(a) is included in Class 9 in column 3 of Schedule 1; or

(b) is not included in Class 9 in column 3 of Schedule 1 and does not meet the criteria for inclusion in any of Classes 1 to 8 and ***SOR/2008-34***

(i) ***Repealed*** ***SOR/2014-306***

(ii) is a marine pollutant under section 2.7 of Part 2 (Classification), or ***SOR/2014-306***

For a liquid, the UN number and shipping name are UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., and for a solid, the UN number and shipping name are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(iii) except for asphalt or tar, is offered for transport or transported at a temperature greater than or equal to 100°C if it is in a liquid state or at a temperature greater than or equal to 240°C if it is in a solid state,

For a liquid, the UN number and shipping name are UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S., and for a solid, the UN number and shipping name are UN3258, ELEVATED TEMPERATURE SOLID, N.O.S.

(iv) ***Repealed*** ***SOR/2008-34***

(v) ***Repealed*** ***SOR/2008-34***

2.43.1 Lithium Cells and Batteries ***SOR/2014-306***

(1) A person must not handle, offer for transport or transport lithium cells and batteries under any of the following shipping names unless the cells and batteries meet the conditions set out in subsection (2):

(a) UN3090, LITHIUM METAL BATTERIES;

(b) UN3091, LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT;

(c) UN3480, LITHIUM ION BATTERIES; or

(d) UN3481, LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT.

Lithium cells and batteries are classified under

(a) UN3090, LITHIUM METAL BATTERIES, if they contain lithium metal or lithium alloy;

(b) UN3091, LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT, if they contain lithium metal or lithium alloy and are contained in or packed with equipment;

(c) UN3480, LITHIUM ION BATTERIES, if they contain any type of lithium ion; and

(d) UN3481, LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, if they contain any type of lithium ion and are contained in or packed with equipment.

(2) The conditions are as follows:

(a) the cell or battery type passes each test set out in subsection 38.3 of Part III of the Manual of Tests and Criteria;

(b) each cell or battery has a safety venting device or is designed to prevent a violent rupture under normal conditions of transport;

(c) each cell or battery is equipped to prevent external short circuits; and

(d) each battery containing cells or a series of cells connected in parallel is equipped with diodes, fuses or other devices that prevent reverse current flow.

SOR/2014-306

2.44 Divisions

There are no divisions for Class 9.

2.45 Packing Groups

Substances included in Class 9, Miscellaneous Products, Substances and Organisms, are included in Packing Group III unless they are included in a different packing group shown for them in column 4 of Schedule 1.

APPENDIX 1 --- *Repealed* *SOR/2014-306*

APPENDIX 2
SOR/2008-34

DESCRIPTION OF COMPATIBILITY GROUPS CLASS 1, EXPLOSIVES

Item	Column 1 Description	Column 2 Compatibility Group	Column 3 Possible Class
1.	Primary explosive substance	A	1.1
2.	Article containing a primary explosive substance and not containing two or more effective protective features. Some articles (such as detonators for blasting, detonator assemblies for blasting and primers, cap-type) are included in the compatibility group set out in column 2 even though they do not contain primary explosives	B	1.1 1.2 1.4
3.	Propellant explosive substance or other deflagrating explosive substance or article containing such an explosive substance	C	1.1 1.2 1.3 1.4
4.	Secondary detonating explosive substance or black powder or article containing a secondary detonating explosive substance, in each case without means of initiation and without a propelling charge or article containing a primary explosive substance and containing two or more effective protective features	D	1.1 1.2 1.4 1.5
5.	Article containing a secondary detonating explosive substance, without means of initiation, with a propelling charge (other than one containing a flammable liquid, flammable gel or hypergolic liquids)	E	1.1 1.2 1.4
6.	Article containing a secondary detonating explosive substance with its own means of initiation, with a propelling charge (other than one containing a flammable liquid, flammable gel or hypergolic liquids) or without a propelling charge	F	1.1 1.2 1.3 1.4
7.	Pyrotechnic substance, an article containing a pyrotechnic substance or an article containing an explosive substance and an illuminating, incendiary, tear- or smoke-producing substance (other than a water-activated article or one containing white phosphorus, phosphides, a pyrophoric substance, a flammable liquid, flammable gel or hypergolic liquids)	G	1.1 1.2 1.3 1.4
8.	Article containing an explosive substance and white phosphorus	H	1.2 1.3
9.	Article containing an explosive substance and a flammable liquid or flammable gel	J	1.1 1.2 1.3
10.	Article containing an explosive substance and a toxic substance	K	1.2 1.3
11.	Explosive substance or article containing an explosive substance and presenting a special risk (e.g., that is due to water activation or to the presence of hypergolic liquids, phosphides or a pyrophoric substance) that needs isolation of each type	L	1.1 1.2 1.3
12.	Articles containing only extremely insensitive detonating substances	N	1.6
13.	Substance or article packed or designed so that any hazardous effects arising from accidental functioning are confined within the means of containment unless the means of containment has been degraded by fire, in which case all blast or projection effects are limited to the extent that they do not significantly hinder or prevent fire fighting or other emergency response efforts in the immediate vicinity of the means of containment	S	1.4

APPENDIX 3

SOR/2008-34

GUIDE TO CATEGORY A AND CATEGORY B ASSIGNMENT

Infectious substances are divided into two categories: Category A and Category B. This Appendix is a list of infectious substances by category. Category A is identified by two UN numbers and shipping names, UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS and UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. Category B is identified by one UN number and shipping name, UN3373, BIOLOGICAL SUBSTANCE, CATEGORY B.

The lists in this Appendix are not exhaustive or complete and are provided for guidance to those who must classify infectious substances. If there is any doubt as to whether a substance is infectious or as to the category to which it must be assigned, assistance may be obtained from the Director, Office of Laboratory Security, Public Health Agency of Canada, or from the Director, Biohazard Containment and Safety, Canadian Food Inspection Agency.

An infectious substance is defined in Part 1, Coming into Force, Repeal, Interpretation, General Provisions and Special Cases, as "a substance known or reasonably believed to contain viable micro-organisms such as bacteria, viruses, rickettsia, parasites, fungi and other agents such as prions that are known or reasonably believed to cause disease in humans or animals and that are listed in Appendix 3 to Part 2, Classification, or that exhibit characteristics similar to a substance listed in Appendix 3".

If the symbol "@" appears beside an infectious substance listed in this Appendix, that infectious substance affects animals only. The UN number and shipping name are UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS or UN3373, BIOLOGICAL SUBSTANCE, CATEGORY B.

If there is no symbol "@", the infectious substance affects humans or animals. The UN number and shipping name is UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS or UN3373, BIOLOGICAL SUBSTANCE, CATEGORY B.

The item column gives sequential item numbers for the entries in this Appendix. Beside the item number in parentheses is the corresponding item number in the French-language Appendix.

Substances with an asterisk "" against them in column 3 of the Category A list require an Emergency Response Assistance Plan in accordance with subsection 7.1(7) of Part 7, Emergency Response Assistance Plan.*

SOR/2011-239

UN2814, Category A — Virus and Bacteria

Virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1 (1)	Arenaviridae	Arenavirus	(a) Flexal virus (b) Guanarito virus* (c) Junin virus* (d) Lassa virus* (e) Machupo virus* (f) Sabia virus*
2 (2)	Bunyaviridae	(1) Hantavirus	(a) Hantaviruses causing hemorrhagic fever with renal syndrome (b) Hantaviruses causing pulmonary syndrome
		(2) Nairovirus	Crimean-Congo hemorrhagic fever virus*
		(3) Phlebovirus	Rift Valley Fever virus
3 (3)	Coronaviridae	Coronavirus	Human Coronavirus — SARS, Severe Acute Respiratory Syndrome
4 (4)	Filoviridae	Filovirus	(a) Ebola virus* (b) Marburg virus*
5 (5)	Flaviviridae	Flavivirus	(a) Dengue virus (b) Japanese encephalitis virus (c) Kyasanur Forest virus* (d) Omsk hemorrhagic fever virus* (e) Russian spring-summer encephalitis virus* (f) Tick-borne encephalitis virus (g) West Nile fever virus (h) Yellow fever virus (wild type)
6 (6)	Hepadnaviridae	Orthohepadna virus	Hepatitis B virus
7 (7)	Herpesviridae (Alphaherpesvirinae)	Simplexvirus	Herpes B virus* (Cercopithecine Herpesvirus-1): (a) Herpesvirus simiae (b) Monkey B virus
8 (8)	Orthomyxoviridae	Influenzavirus A, B and C	Highly pathogenic avian influenza virus
9 (9)	Paramyxoviridae	Henipa virus (formerly: Morbillivirus)	(a) Hendra virus* (b) Nipah virus* (Hendra-like virus)
10 (10)	Picornaviridae	Enterovirus	Polioviruses
11 (11)	Poxviridae	Orthopoxvirus	(a) Monkeypox virus (b) Variola* (smallpox virus)
12 (12)	Retroviridae	Lentivirus	Human Immunodeficiency virus
13 (13)	Rhabdoviridae	Lyssavirus	Rabies virus
14 (14)	Togaviridae	Alphavirus	(a) Eastern equine encephalitis virus (b) Venezuelan equine encephalitis virus

Bacteria

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1 (1)		Bacillus	anthracis
2 (2)		Brucella	(a) abortus (b) melitensis (c) suis
3 (3) ***SOR/2012-245***		Burkholderia	(a) mallei (formerly: pseudomonas mallei) (Glanders) (b) pseudomallei (formerly: pseudomonas pseudomallei)
4 (4)		Chlamydia	psittaci (avian strains)
5 (5)		Clostridium	botulinum
6 (6)		Cocidioides	Immitis
7 (7)		Coxiella	burnetti
8 (8)		Escherichia	coli verotoxigenic — ETEC

Item	Column 1 Family	Column 2 Genus	Column 3 Species
9 (9)		Francisella	tularensis
10 (10)		Mycobacterium	tuberculosis
11 (11)		Rickettsia	(a) prowazekii (b) rickettsii
12 (12)		Shigella	dysenteriae (Type 1)
13 (13)		Yersinia	Pestis

UN2900, Category A — Virus and Bacteria

Virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1 (1)	Flaviviridae	Pestivirus	Hog Cholera virus (Classical Swine Fever)
2 (2)	Paramyxoviridae	Morbillivirus	(a) Peste des petits ruminants virus (b) Rinderpest virus
3 (3)	Paramyxoviridae (subfamily Paramyxovirinae)	Rubulavirus	Avian paramyxovirus Type 1 Velogenic Newcastle virus
4 (4)	Picornaviridae	(1) Aphthovirus	Foot and mouth disease virus*
		(2) Enterovirus	Swine vesicular disease virus
5 (5)	Poxviridae	Capripoxvirus	(a) Goat pox virus (b) Lumpy skin disease virus (c) Sheep pox virus
6 (6)	Rhabdoviridae	Vesiculovirus	Vesicular stomatitis virus
7 (7)	Unclassified	Unclassified	African Swine fever virus

Bacteria

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1 (1)		Mycoplasma	mycoïdes

UN3373, Category B — Virus, Bacteria and Fungi

Virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1 (1)	Adenoviridae	(1) Aviadenovirus	Animal, all isolates@
		(2) Mastadenovirus	(a) Adenovirus (human, all types) (b) Animal, all isolates@
2 (2)	Arenaviridae	Arenavirus	(a) Lymphocytic choriomeningitis virus (b) Mopeia virus (c) Tacaribe viruses (d) Whitewater Arroyo virus
3 (3)	Arteviridae	Arterivirus	(a) Equine arteritis virus@ (b) Porcine reproductive/Respiratory syndrome virus@ (c) Simian hemorrhagic fever virus
4 (4)	Astroviridae	Astrovirus	All serotypes

Item	Column 1 Family	Column 2 Genus	Column 3 Species
5 (5)	Birnaviridae	Birnavirus	(a) Infectious bursal disease virus@ (b) Infectious pancreatic necrosis virus@
6 (6)	Bornaviridae	Bornavirus	Borna disease virus (CNS-encephalo-myelitis)
7 (7)	Bunyaviridae	(1) Bunyavirus	(a) Aino virus@ (b) Akabane virus@ (c) Bunyamwera virus (d) California encephalitis virus (e) Jamestown Canyon virus (f) La Crosse virus (g) Lumbo virus (h) Oropouche virus (i) Snowshoe hare virus (j) Tahyna virus
		(2) Hantavirus	(a) Hantaviruses not causing pulmonary syndrome (b) Hantaviruses not causing hemorrhagic fever with renal syndrome
		(3) Nairovirus	(a) Hazara virus (b) Nairobi sheep disease virus@
8 (8)	Caliciviridae	Calicivirus	(a) European brown hare virus@ (b) Feline calicivirus@ (c) Hepatitis E virus (d) Norwalk virus (e) Rabbit hemorrhagic disease virus@ (f) San Miguel sea lion virus@ (g) Vesicular exanthema of swine virus
9 (9)	Circoviridae	Circovirus	(a) Avian circovirus@ (b) Porcine circovirus@
10 (10)	Coronaviridae	(1) Coronavirus	(a) Avian infectious bronchitis virus@ (b) Bovine coronavirus, all strains (c) Canine, Rat and Rabbit coronavirus@ (d) Feline enteric coronavirus@ (e) Feline infectious peritonitis virus@ (f) Hemagglutinating encephalo-myelitis virus of swine@ (g) Human coronavirus, all strains excluding SARS (h) Mouse hepatitis virus@ (i) Porcine epidemic diarrhea virus@ (j) Porcine respiratory coronavirus@ (k) Transmissible gastroenteritis virus of swine@ (l) Turkeys enteritis coronavirus@
		(2) Torovirus	(a) Berne virus@ (b) Breda virus@
11 (11)	Flaviviridae	(1) Flavivirus	(a) Kunjin virus (b) Louping ill virus (c) Murray Valley encephalitis virus (Australia encephalitis) (d) Powassan virus (e) Rocio virus (f) St. Louis encephalitis virus (g) Turkey meningoencephalitis virus (h) Wesselsbron virus (i) Yellow fever virus (vaccine strain 17D)
		(2) Hepacivirus	Hepatitis C virus
		(3) Pestivirus	(a) Border disease virus@ (b) Bovine viral diarrhea virus@
12 (12)	Hepadnaviridae	(1) Delta virus	Hepatitis D (Delta) virus
		(2) Avihepadnavirus	Duck hepatitis B virus@
		(3) Orthohepadnavirus	(a) Ground squirrel hepatitis B virus (b) Woodchuck hepatitis virus@

Item	Column 1 Family	Column 2 Genus	Column 3 Species
13 (13)	Herpesviridae (Alphaherpes-virinae)	(1) Simplexvirus	(a) Human herpes virus 1 (b) Human herpes virus 2 (c) Mammillitis virus (bovine herpes-virus 2)@
		(2) Varicellovirus	(a) All isolates, excluding pseudorabies virus (b) Bovine infectious rhinotracheitis (herpesvirus 1) (c) Equine abortion virus (equine herpesvirus 1)@ (d) Equine coital exanthema virus (equine herpesvirus 3)@ (e) Equine rhinopneumonitis (equine herpesvirus 4)@ (f) Feline rhinotracheitis (feline herpesvirus 1)@ (g) Human herpes virus 3 (Varicella-zoster virus) (f) Pseudorabies virus (suis herpes virus 1) (g) Pseudorabies virus (suis herpes virus 1)
		(3) Unclassified	(a) Canine herpesvirus 1@ (b) Caprine herpesvirus 1@ (c) Cervid herpesvirus 1 and 2@
14 (14)	Herpesviridae (Betaherpes-virinae)	(1) Cytomegalovirus	(a) Human cytomegalovirus (CMV) (b) Porcine cytomegalovirus (suid herpesvirus 2)@
		(2) Muromegalovirus	Caviid herpesvirus (guinea-pig cytomegalovirus)@
		(3) Roseolovirus	Equine cytomegalovirus (equine herpesvirus 2)@
15 (15)	Herpesviridae (Gammaherpes virinae)	(1) Lymphocrypto-virus	(a) Epstein-Barr-like virus (EBV) (Monkey virus) (b) Epstein-Barr virus (EBV) (Human herpes-virus 4) (c) Human B lymphotropic virus
		(2) Rhadinovirus	(a) Herpesvirus ateles (b) Herpesvirus saimiri (c) Malignant catarrhal fever virus (Alcelaphine herpesvirus)@
16 (16)	Orthomyxovi-ridae	Influenzavirus A, B and C	Influenza A, B, C and all isolates except influenza A — avian H5 and H7, Human H2 and 1918 H1N1 Spanish flu strain
17 (17)	Paramyxoviridae	Pneumovirus	Turkey rhinotracheitis virus@
18 (18)	Paramyxoviridae (subfamily Paramyxovirinae)	(1) Morbillivirus	(a) Canine distemper virus@ (b) Measles virus (c) Phocine distemper virus@
		(2) Paramyxovirus	Parainfluenza types 1-4
		(3) Respirovirus	(a) Bovine Parainfluenza virus Type 3@ (b) Sendai virus (mouse parainfluenza virus)@
		(4) Rubulavirus	(a) Avian paramyxovirus Types 2 to 9@ (b) Mumps virus
19 (19)	Paramyxoviridae (subfamily Pneumovirinae)	Pneumovirus	(a) Bovine respiratory syncytial virus@ (b) Human respiratory syncytial virus (c) Pneumonia virus of mice@
20 (20)	Parvoviridae	Parvovirus	All isolates
21 (21)	Picornaviridae	(1) Cardiovirus	(a) All isolates (human) (b) Swine encephalomyocarditis virus@ (c) Theiler's murine poliovirus
		(2) Enterovirus	(a) All isolates, excluding Swine vesicular disease virus and Polioviruses (b) Coxsackieviruses
		(3) Hepatovirus	All isolates (including Hepatitis A, human enterovirus type 72)
		(4) Rhinovirus	(a) All isolates (human) (b) Bovine rhinovirus Types 1 to 3@ (c) Equine rhinovirus@ (d) Feline Rhinovirus@ (e) Rhinovirus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
22 (22)	Poxviridae	(1) Avipoxvirus	(a) All isolates@ (animal) (b) All isolates (human)
		(2) Leporipoxvirus	(a) Rabbit (Shope) fibroma virus@ (b) Squirrel fibroma virus@
		(3) Orthopoxvirus	(a) All isolates@, excluding Monkeypox and Variola (smallpox virus) (b) Buffalo pox (c) Cowpox virus (d) Rabbit pox (e) Skunkpox (f) Vaccinia
		(4) Parapoxvirus	(a) All isolates@, excluding Sealpox virus (b) Bovine papular stomatitis virus (c) Orf virus (d) Pseudocowpox virus (paravaccinia) (e) Sealpox virus
23 (23)	Reoviridae	(1) Coltivirus	Coltivirus
		(2) Orbivirus	(a) Epizootic hemorrhagic disease virus@ (b) Equine encephalosis virus@ (c) Ibaraki virus (d) Palyam virus@
		(3) Orthoreovirus	(a) Animal, all isolates except Ndelle and Ourem viruses (b) Types 1, 2 and 3
		(4) Reovirus, types 1 and 2	Animal, all isolates@
		(5) Rotavirus	(a) Animal, all isolates@ (b) Rotavirus
24 (24)	Retroviridae	(1) Betaretrovirus	Mason-Pfizer monkey virus@
		(2) Gammare-trovirus	(a) Animal, all isolates@ (b) Avian reticuloendotheliosis virus
		(3) Deltaretrovirus	Human T-cell lymphotrophic viruses (HTLV)
25 (25)	Retroviridae (subfamily Spumavirinae)	(1) Spumavirus	All isolates
		(2) Deltaretrovirus	Bovine leukemia virus@
26 (26)	Rhabdoviridae	(1) Lyssavirus	(a) Australian bat lyssavirus (b) Duvenhage virus (c) European bat lyssavirus I (d) European bat lyssavirus II (e) Lagos bat virus (f) Mokola virus (g) Rabies virus-Fixed virus
		(2) Vesiculovirus	(a) Alagoas virus (b) Chandipura virus (c) Cocal virus (d) Isfahan virus (e) Pyri virus (f) Vesicular stomatitis virus — Indiana lab strain
27 (27)	Togaviridae	(1) Alphavirus	(a) Bebaru virus (b) Chikungunya virus (c) Everglades virus (d) Getah virus (e) Highlands J virus (f) Mayaro virus (g) Mucambo virus (h) Ndumu virus (i) O'Nyong-Nyong virus (j) Ross River virus (k) Semliki forest virus (l) Sindbis (m) Tonate virus (n) Western equine encephalitis virus strain TC-83
		(2) Arterivirus	Equine arteritis virus@
		(3) Pestivirus	Border disease virus
		(4) Rubivirus	Rubella virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
28 (28)	Transmissible Spongiform Encephalopathies		(a) Bovine spongiform encephalophy (b) Chronic wasting disease of captive mule deer/elk@ (c) Creutzfeldt-Jacob disease (d) Gertsmann-Straussier-Scheinker (e) Kuru (f) Scrapie@ (g) Transmissible mink encephalopathy@
29 (29)	Unclassified	Unclassified	Swine hepatitis E virus@

UN3373, Category B — Virus, Bacteria and Fungi — *Continued*

Bacteria

Item	Column 1 Genus	Column 2 Species
1 (1)	Acholeplasma	oculi@
2 (2)	Acinetobacter	(a) baumannii (b) calcoaceticus (c) Iwoffii (d) spp
3 (3)	Actinobacillus	(a) actinomycetemcomitans (b) capsulatus@ (c) equuli@ (d) lignieresii@ (e) pleuropneumoniae@ (f) seminis@ (g) spp (h) suis@ (i) ureae@
4 (4)	Actinomadura	(a) madurae (b) pelletieri
5 (5)	Actinomyces	(a) bovis@ (b) gerencseriae (c) hordeovulneris@ (d) israelii (e) naeslundii (f) pyogenes (g) spp (h) suis@ (i) viscosus@
6 (6)	Aeromonas	(a) hydrophila (b) punctata (c) spp
7 (7)	Afipia	spp
8 (8)	Agrobacterium	Radiobacter
9 (9)	Alcaligenes	spp
10 (10)	Amycolata	Autotrophica
11 (11)	Anaplasma	(a) caudatum@ (b) centrale@ (c) marginale@ (d) ovis
12 (12)	Arcanobacterium	(a) haemolyticum (b) pyogenes
13 (13)	Arcobacter	(a) butzeri (b) cryoaerophilus (c) spp
14 (14)	Arizona	spp
15 (15)	Bacillus	Cereus

Item	Column 1 Genus	Column 2 Species
16 (16)	Bacteroides	(a) fragilis (b) heparinolyticus@ (c) levii (d) salivosus@ (e) spp
17 (17)	Bartonella	(a) bacilliformis (b) elizabethae (c) henselae (d) quintana (e) spp
18 (18)	Bordetella	(a) avium@ (b) bronchiseptica (c) parapertussis (d) pertussis (e) spp
19 (19)	Borrelia	(a) burgdorferi (b) duttonii (c) recurrentis (d) spp (e) vincenti
20 (20)	Brachyspira	(a) hyodysenteriae (b) innocens
21 (21)	Brucella	(a) canis (b) ovis (c) spp, excluding abortus, melitensis and suis
22 (22)	Burkholderia	(a) cepacia genomovars I (b) cepacia genomovars III (c) gladioli (d) multivorans (e) spp, excluding mallei and pseudomallei (f) stabilis (g) vietnamensis
23 (23)	Campylobacter	(a) coli (b) fetus, subspecies fetus (intestinalis) (c) fetus, subspecies venerealis (d) hyointestinalis (e) jejuni (f) lari (g) mucosalis@ (h) spp (i) sputorum
24 (24)	Capnocytophaga	spp
25 (25)	Cardiobacterium	hominis
26 (26)	Chlamydia	(a) pneumoniae (b) psittaci (non-avian strains) (c) trachomatis
27 (27)	Chryseobacterium	meningosepticum
28 (28)	Citrobacter	(a) diversus (b) freundii (c) spp
29 (29)	Clostridium	(a) chauvoei (b) colinum@ (c) difficile (d) haemolyticum (e) histolycum (f) novyi (g) perfringens (h) septicum (i) sordellii (j) spiriforme@ (k) spp, excluding botulinum (l) tetani (m) villosum@

Item	Column 1 Genus	Column 2 Species
30 (30)	Corynebacterium	(a) amycolatum (b) cystitidis@ (c) diphtheriae (d) jeikeium (e) kutscheri@ (f) minutissimum (g) pilosum (h) pseudotuberculosis (i) renale (j) spp (k) ulcerans
31 (31)	Dietzia	maris
32 (32)	Dermabacter	hominis
33 (33)	Dermatophilus	congolensis
34 (34)	Dichelobacter	nodosus
35 (35)	Edwardsiella	tarda
36 (36)	Eikenella	corrodens
37 (37)	Enterobacter	(a) aerogenes/cloacae (b) spp
38 (38)	Enterococcus	(a) faecalis (b) faecium (c) spp
39 (39)	Ehrlichia	(a) sennetsu (b) spp
40 (40)	Erysipelothrix	Tonsillarum
41 (41)	Escherichia	(a) coli (b) coli enteroinvasive — EIEC (c) coli enteropathogenic — EPEC
42 (42)	Eubacterium	suis@
43 (43)	Fluoribacter	Bozemaniae
44 (44)	Francisella	(a) novicida (b) philomiragia
45 (45)	Fusobacterium	(a) necrophorum (b) spp
46 (46)	Gardnerella	vaginalis
47 (47)	Gordonia	spp
48 (48)	Haemophilus	(a) ducreyi (b) influenzae (c) influenzaemurium@ (d) paragallinarum (e) parainfluenzae (f) parasuis@ (g) piscium@ (h) somnus@ (i) spp
49 (49)	Helicobacter	(a) cinaedi (b) felis@ (c) fennelliae (d) mustelae (e) nemestrinae (f) pullorum (g) pylori
50 (50)	Hemobartonella	felis@
51 (51)	Kingella	kingae
52 (52)	Klebsiella	(a) granulomatis (b) oxytoca (c) pneumoniae (d) spp
53 (53)	Lactococcus	garvieae
54 (54)	Lawsonia	intracellularis@

Item	Column 1 Genus	Column 2 Species
55 (55)	Legionella	(a) micdadei (b) pneumophilia (c) spp
56 (56)	Leptospira	(a) bratislava (b) canicola/copenhageni (c) grippotyphosa (d) hardjo (e) icterohaemorrhagiae (f) interrogans (g) pomona (h) sejroe (i) var ballum
57 (57)	Listeria	(a) ivanovii@ (b) monocytogenes (c) spp
58 (58)	Mannheimia	haemolytica
59 (59)	Moraxella	(a) bovis@ (b) caprae (c) catarrhalis (d) lacunata (e) phenylpyruvica (f) spp
60 (60)	Morganella	morganii
61 (61)	Mycobacterium	(a) africanum (b) asiaticum (c) avium complex (d) avium/intracellulare (e) bovis (f) bovis (BCG) (g) chelonae (h) fortuitum (i) kansasii (j) leprae (k) malmoense (l) marinum (m) microti (n) paratuberculosis (o) scrofulaceum (p) simiae (q) szulgai (r) ulcerans (s) xenopi
62 (62)	Mycoplasma	(a) caviae (b) hominis (c) pneumoniae (d) spp, excluding mycoides
63 (63)	Neisseria	(a) elongata (b) gonorrhoeae (c) meningitidis (d) spp
64 (64)	Neorickettsia	helminthoeca@
65 (65)	Nocardia	(a) asteroides (b) brasiliensis (c) caviae (d) farcinica (e) nova (f) otitidis-caviarum (g) pseudobrasiliensis (h) spp (i) transvalensis
66 (66)	Ochrobactrum	spp
67 (67)	Oligella	spp
68 (68)	Ornithobacterium	rhinotracheale@
69 (69)	Pandoraea	spp
70 (70)	Pantoea	agglomerans

Item	Column 1 Genus	Column 2 Species
71 (71)	Pasteurella	(a) aerogenes (b) anatipestifer@ (c) caballi@ (d) canis (e) dagmatis (f) granulomatis@ (g) haemolytica (h) multocida (serotypes B:2 and E:2) (i) multocida, except serotypes B:2 and E:2 (j) multocida, subspecies gallicida (k) multocida, subspecies multocida (l) multocida, subspecies septica (m) pneumotropica (n) spp
72 (72)	Peptostreptococcus	(a) anaerobius (b) indolicus@ (c) spp
73 (73)	Plesiomonas	shigelloides
74 (74)	Porphyromonas	spp
75 (75)	Prevotella	(a) melaninogenica (b) spp
76 (76)	Propionibacterium	propionicum
77 (77)	Proteus	(a) mirabilis (b) penneri (c) spp (d) vulgaris
78 (78)	Providencia	(a) alcalifaciens (b) rettgeri (c) spp
79 (79)	Psychrobacter	(a) immobilis (b) phenylpyruvicus
80 (80)	Pseudomonas	(a) aeruginosa (b) spp
81 (81)	Ralstonia	spp
82 (82)	Rhodococcus	(a) equi (b) spp
83 (83)	Rickettsia	(a) akari (b) australis (c) canadensis (d) conorii (e) helvetica (f) montanensis (g) parkeri (h) rhipicephali (i) spp, excluding prowazekii and rickettsii (j) tsutsugamuchi (k) typhi (mooseri)
84 (84)	Rothia	(a) dentocarosia (b) mucilagenosas

Item	Column 1 Genus	Column 2 Species
85 (85)	Salmonella	(a) abortus equi (b) abortus ovis (c) agona (d) anatum (e) arizonae (f) choleraesuis (g) derby (h) dublin (i) enteritidis (j) gallinarum@ (k) heidelberg (l) montevideo (m) newport (n) (other serovars) (o) paratyphi A, B and C (p) pullorum@ (q) spp (r) typhi (s) typhimurium (t) typhisuis@
86 (86)	Serpulina	spp
87 (87)	Serratia	(a) liquefaciens (b) marcescens
88 (88)	Shigella	(a) boydii (b) dysenteriae (other than Type 1) (c) flexneri (d) sonnei
89 (89)	Staphylococcus	(a) aureus (b) aureus (MRSA) (c) epidermidis (d) intermedius@
90 (90)	Stenotrophomonas	maltophilia
91 (91)	Streptobacillus	(a) moniliformis (b) spp
92 (92)	Streptococcus	(a) agalactiae (b) bovis (c) dysgalactiae (d) equi (e) pneumoniae (f) pyogenes (g) spp (h) suis (i) uberis
93 (93)	Taylorella	equigenitalis@
94 (94)	Treponema	(a) carateum (b) pallidum (c) pertenue (d) spp (e) vincentii
95 (95)	Tsukamurella	spp
96 (96)	Ureaplasma	urealyticum
97 (97)	Vagococcus	salmoninarum@
98 (98)	Vibrio	(a) cholerae (b) parahaemolyticus (c) spp (d) vulnificus
99 (99)	Yersinia	(a) enterocolitica (b) pseudotuberculosis (c) ruckeri@

UN3373, Category B — Virus, Bacteria and Fungi — *Continued*

Fungi

Item	Column 1 Genus	Column 2 Species
1 (1)	Aspergillus	(a) flavus (b) fumigatus (c) nidulans (d) niger (e) oryzae (f) terreus
2 (2)	Blastomyces	dermatitidis (formerly: Ajellomyces dermatitidis)
3 (3)	Candida	(a) albicans (b) glabrata (c) guilliermondii (d) krusei (e) parapsilosis
4 (4)	Cladophialophora	bantiana (formerly: Cladosporium bantianum)
5 (5)	Cladosporium	carrionii
6 (6)	Cryptococcus	neoformans
7 (7)	Emmonsia	parva
8 (8)	Epidermophyton	floccosum
9 (9)	Histoplasma	(a) capsulatum (formerly: Ajellomyces capsulatum) (b) capsulatum var capsulatum (c) capsulatum var duboisii (d) capsulatum var farciminosum
10 (10)	Loboa	loboi
11 (11)	Microsporum	(a) audouinii (b) canis (c) distortum (d) equinum (e) ferrugineum (f) fulvum (g) gypseum (h) nanum (i) persicolor (j) praecox (k) vanbreuseghemii
12 (12)	Paracoccidioides	brasiliensis
13 (13)	Penicillium	marneffei
14 (14)	Sporothrix	(a) Schenckii var luriei (b) Schenckii var schenckii
15 (15)	Trichophyton	(a) concentricum (b) equinum/autotrophicum (c) equinum/equinum (d) gourvilii (e) megninii (f) mentagrophytes/erinacei (g) mentagrophytes/interdigitale (h) mentagrophytes/nodulare (i) mentagrophytes/mentagrophytes (j) mentagrophytes/quinckeanum (k) rubrum (l) schoenleinii (m) simii (n) sudanese (o) tonsurans (p) violaceum (q) yaoundei

APPENDIX 4 --- *Repealed* *SOR/2008-34*

APPENDIX 5 --- *Repealed* *SOR/2008-34*