SCHEDULE 1 Regulation 5(3) and (4)

CLASSIFICATION AND ASCERTAINMENT OF OTHER PARTICULARS OF DANGEROUS GOODS

# Part I

## Table of classifications and other particulars

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| Non-flammable, non-toxic gas | A substance which— (a) at 50°C has a vapour pressure greater than 300 kilopascals absolute or is completely gaseous at 20°C at a standard pressure of 101.3 kilopascals; and (b) is carried at an absolute pressure of not less than | — | — | 2.2 | | COMPRESSED GAS |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | | 280 kilopascals or in liquefied form, other than a toxic gas or a flammable gas. | | | | |
| Toxic gas | A substance which at 50°C has a vapour pressure greater than 300 kilopascals absolute or is completely gaseous at at 20°C at a standard pressure of 101.3 kilopascals and which is toxic. | — | — | 2.3 | | TOXIC GAS |
| Flammable gas | A substance which— (a) at 50°C has | — | — | 2.1 | | FLAMMABLE GAS |

| Column 1 Classification | Column 2 Hazardous properties | Column 3 Relevant properties | Column 4 Packing Group | Column 5 Class number | Column 6 Danger sign | Column 7 Optional lettering |
|---|---|---|---|---|---|---|
| | | a vapour pressure greater than 300 kilopascals absolute or is completely gaseous at 20°C at a standard pressure of 101.3 kilopascals and is flammable; or | | | | |
| | | (b) is packed in an aerosol dispenser where that dispenser contains either— | | | | |
| | | (i) more than 45 per cent by mass of a flammable substance, or | | | | |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | | (ii) more than 250 grammes of a flammable substance,<br>and in this sub-paragraph flammable substances means a flammable gas or flammable liquid having a flash point less than or equal to 100°C. | | | | |
| Flammable liquid | A liquid with a flash point—<br>(a) above 61°C and which is carried at a temperature above | (a) (in the case of any liquid having a flash point of less than 23°C and containing | II | 3 | | FLAMMABLE LIQUID |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | | its flash point; or | either not more than 5% of toxic or corrosive substances with a packing group of I or II or not more than 5% of flammable liquids with a packing group of I and are not subsidiary hazard of toxic or corrosive) — (i) less than 3% of it separates out | | | |
| | | (b) of 61°C or below except— | | | | |
| | | (i) a liquid which has a flash point equal to or more than 35°C, and when tested in accordance with the appropriate approved method does not support combustion; | | | | |
| | | (ii) a viscous substance which complies with the provisions of Part III and is contained | | | | |

| Column 1 Classification | Column 2 Hazardous properties | Column 3 Relevant properties | Column 4 Packing Group | Column 5 Class number | Column 6 Danger sign | Column 7 Optional lettering |
|---|---|---|---|---|---|---|
| | | in a receptacle with a capacity of less than 450 litres, or<br>(iii) a substance which is classified as a flammable gas because it has the hazardous properties specified in sub-paragraph (*b*) corresponding to the entry for a "flammable gas" in column 1. | into a clear solvent layer following a suitable solvent separation test,<br>(ii) the flash point of it is specified in column 1 of the Table set out in Part IV,<br>(iii) the kinematic viscosity of it is within the range specified in column 2 of the Table set out in | | | |

| Column 1 Classification | Column 2 Hazardous properties | Column 3 Relevant properties | Column 4 Packing Group | Column 5 Class number | Column 6 Danger sign | Column 7 Optional lettering |
|---|---|---|---|---|---|---|
| | | | Part IV which is opposite to the flash point of that liquid referred to in head (ii), and | | | |
| | | | (iv) is contained in a receptacle with a capacity of less than 450 litres; or | | | |
| | | (b) (in the case of any other liquid) it has— | (b) | | | |
| | | (i) an initial boiling point not greater | I | | | |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering | |
|---|---|---|---|---|---|---|---|
| | | than 35°C, | | | | | |
| | | (ii) an initial boiling point above 35°C and a flash point of less than 23°C, or | II | | | | |
| | | (iii) an initial boiling point above 35°C and a flash point of 23°C or above. | III | | | | |
| Flammable solid | (a) a solid which, under conditions encountered in carriage, is readily combustible or may cause or contribute | (a) a substance which is— (a) water-wetted (when in a dry state) required to be classified (as defined | I<br>(a) and | 4.1 | | FLAMMABLE SOLID | |

| Column 1 Classification | Column 2 Hazardous properties | Column 3 Relevant properties | Column 4 Packing Group | Column 5 Class number | Column 6 Danger sign | Column 7 Optional lettering |
|---|---|---|---|---|---|---|
| | | to fire through friction; or<br>(b) a self-reactive or related substance which is liable to undergo a strongly exothermic reaction. | by regulation 2(1) of the Classification and Labelling of Explosives Regulations (Northern Ireland) 1991) in pursuance of regulation 3(2) (*a*) of those Regulations;<br>(b) (i) a self-reactive substance; or<br>(ii) a readily combustible solid which, when ignited, burns very vigorously or intensely and is difficult to extinguish;<br>(c) a (d) readily combustible solid | (i) | | | |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | | which when ignited burns vigorously or intensely. | | | | |
| Spontaneously combustible substance | Any substance which is liable to spontaneous heating under conditions encountered in carriage or to heating in contact with air being then liable to catch fire. | A substance which is—<br>(a) a pyrophoric substance which ignites instantly on contact with air;<br>(b) liable to ignite on contact with air within a short space of time, particularly under conditions of spillage; or<br>(c) any other substance which is liable to ignite | I<br>(a)<br>I<br>(b)<br>I<br>(c) | 4.2 | | SPONTANE-OUSLY COMBUSTIBLE |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | | on contact with air. | | | | |
| Substance which in contact with water emits flammable gas | A substance which in contact with water is liable to become spontaneously combustible or to give off a flammable gas. | A substance which— (a) reacts vigorously with water at ambient temperatures and demonstrates generally a tendency for the gas produced to ignite spontaneously or reacts readily with water at ambient temperatures so that the rate of evolution of flammable gas is equal to or either | | 4.3 | | DANGEROUS WHEN WET<br>I |

| Column 1 Classification | Column 2 Hazardous properties | Column 3 Relevant properties | Column 4 Packing Group | Column 5 Class number | Column 6 Danger sign | Column 7 Optional lettering |
|---|---|---|---|---|---|---|
| | | | greater than 10 litres per kilogramme of substance over any period of one minute; | | | |
| | | reacts (a) | (b) readily with water at ambient temperatures so that the maximum rate of evolution of flammable gas is equal to or greater than 20 litres per kilogramme of substance per hour; or | | | II |
| | | reacts (a) | (c) slowly | | | III |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | | | with water at ambient temperatures so that the maximum rate of evolution of flammable gas is greater than 1 litre per kilogrammme of substance per hour. | | | |
| Oxidising substance | A substance other than an organic peroxide which, although not necessarily combustible, may by yielding oxygen or by a similar process cause or contribute to the combustion of other material. | A solid substance which, when mixed with cellulose in a ratio of either 1:4 or 1:1 by mass, exhibits a burning rate at least as fast as that for a— (a) 3:2 mixture by mass of | I (a) | 5.1 | | OXIDIZING AGENT |

| Column 1 Classification | Column 2 Hazardous properties | Column 3 Relevant properties | Column 4 Packing Group | Column 5 Class number | Column 6 Danger sign | Column 7 Optional lettering | |
|---|---|---|---|---|---|---|---|
| | | | potassium bromate and cellulose; | | | | |
| | | (b) 2:3 (1b) mixture by mass of potassium bromate and cellulose; or | | | | | |
| | | (c) 3:7 (1d) mixture by mass of potassium bromate and cellulose. | | | | | |
| | | A liquid substance which, when mixed with cellulose in a ratio of 1:1 by mass, exhibits a pressure rise at least as fast as that of a 1:1 mixture by mass of— | | | | | |
| | | (a) 50% (2a) perchloric acid and cellulose; | | | | | |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering | |
|---|---|---|---|---|---|---|---|
| | | (40% to 60%) aqueous sodium chlorate solution and cellulose; or | II | | | | |
| | | (65% to 70%) aqueous nitric acid and cellulose. | II | | | | |
| Organic peroxide | A substance which is—<br>(a) an organic peroxide; and<br>(b) an unstable substance which may undergo exothermic self-accelerating decomposition. | Any substance classified as an organic peroxide. | II | 5.2 | | ORGANIC PEROXIDE | |
| Toxic substance | A substance which is liable either to cause death or serious injury or to harm human health if swallowed or inhaled | A substance which has been allocated to—<br>(a) packing group I in accordance with the criteria | I | 6.1 | | TOXIC | I |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering | |
|---|---|---|---|---|---|---|---|
| | or by skin contact. | | set out in Part V; | | | | |
| | | packing | (b) group II in accordance with the criteria set out in Part V; or | | | | II |
| | | packing | (c) group III in accordance with the criteria set out in Part V. | | | | III |
| Infectious substance | A substance which either contains viable micro-organisms that are known or reasonably believed to cause disease in animals or | — | — | 6.2 | | — | |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | humans or genetically modified micro-organisms and organisms which are infectious. | | | | | |
| Corrosive substance | A substance which by chemical action will—<br>(a) cause severe damage when in contact with living tissue; or<br>(b) materially damage freight or equipment if leakage occurs. | A substance which—<br>(a) causes full thickness destruction of skin tissue at the site of contact within an observation period of 60 minutes starting after testing on the intact skin of an animal for a period of 3 minutes | | 8 | | CORROSIVE |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering | |
|---|---|---|---|---|---|---|---|
| | | | or less; | | | | |
| | | causes (a) full thickness destruction of skin tissue at the site of contact within an observation period of 14 days starting after testing on the intact skin of an animal for a period of more than 3 minutes but not more than 60 minutes; | (b) | | | | |
| | | causes (a) full thickness | (c) | | | | |

| Column 1 Classification | Column 2 Hazardous properties | Column 3 Relevant properties | Column 4 Packing Group | Column 5 Class number | Column 6 Danger sign | Column 7 Optional lettering |
|---|---|---|---|---|---|---|
| | | | destruction of skin tissue at the site of contact within an observation period of 14 days starting after testing on the intact skin of an animal for a period of more than 60 minutes but not more than 4 hours; or | | | |
| | | | (d) corrosion in steel or aluminium surfaces | | | |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | | at a rate exceeding 6.25 mm a year at a test temperature of 55°C. | | | | |
| Miscellaneous dangerous goods | A substance which— (a) is listed in the approved carriage list and which may create a risk to the health and safety of persons in the conditions encountered in carriage whether or not it has | — | — | 9 | | — |

| Column 1<br>Classification | Column 2<br>Hazardous properties | Column 3<br>Relevant properties | Column 4<br>Packing Group | Column 5<br>Class number | Column 6<br>Danger sign | Column 7<br>Optional lettering |
|---|---|---|---|---|---|---|
| | | any of the hazardous properties of any other classification; |
| | | (b) contains a genetically-modified micro-organism which is capable of altering animals, plants, or micro-biological substances in a way which is not normally the result of natural reproduction but excluding any infectious substance or; |
| | | (c) is hazardous to the environment |

| Column 1 Classification | Column 2 Hazardous properties | Column 3 Relevant properties | Column 4 Packing Group | Column 5 Class number | Column 6 Danger sign | Column 7 Optional lettering |
|---|---|---|---|---|---|---|
| | | but excluding any substance which— (i) is an explosive or radioactive material, (ii) possesses any of the hazardous properties of any other classification, or (iii) constitutes dangerous goods for any other reason. | | | | |

# Part II

## Specification of Danger Signs

1. The danger signs to be used shall be those shown in column 6 of Part I for the classification of the goods shown in the corresponding entry in column 1 of that Part and the signs shall conform in form and colour to those shown in the said column 6, except that in the case of the signs for the classifications "non-flammable non-toxic gas", "flammable gas", "flammable liquid" and "substance which in contact with water emits flammable gas", the symbol may be in white.

2. The words in column 7 of Part I may be included in the lower half of the relevant sign shown in the corresponding entry in column 6 of that Part and where included shall conform in form and colour to those shown in the said column 7, except that—

(a) in the case of the signs for the classifications "non-flammable non-toxic gas", "flammable gas", "flammable liquid", "spontaneously combustible substance" and "substance which in contact with water emits flammable gas", any lettering may be in white;

(b) in the case of the sign for the classification "corrosive substance" the lettering shall be in white;

(c) in place of the word "toxic", the word "poison" may be used wherever it occurs; and

(d) in place of the word "flammable", the word "inflammable" may be used wherever it occurs.

3. Each danger sign shall be in the form of a square set with its sides at an angle of 45° to the vertical.

4. Danger signs shall have a line of the same colour as the symbol, 5 millimetres inside the edge and running parallel to it. (The broken line which surrounds each sign as depicted in column 6 of Part I delineates the edge of that sign and need not be shown.)

# Part III

## Viscous Substances not required to be Classified as Flammable Liquids

For the purposes of Part I, a substance shall not be classified as a flammable liquid if it complies with the following conditions, namely—

(a) the substance does not have the hazardous properties of a toxic or corrosive substance;

(b) the substance is a solution or homogeneous mixture which does not contain more than 20% nitro-cellulose containing not more than 12.6% nitrogen by mass;

(c) the flash point of the substance is equal to or greater than 23°C;

(d) in a suitable solvent separation test, the solvent which separates is not more than 3% of the volume of the substance; and

(e) the viscosity of the substance when determined at 23°C in a flow cup conforming to the International Standards Organisation Standard ISO 2431-1984 or British Standard BS EN 535-1991 and having a jet diameter of 6 mm is—

(i) in a case where the substance contains not more than 60% of a flammable liquid with a flash point of 61°C or less, not less than 40 seconds;

(ii) in any other case, not less than 60 seconds.

# Part IV

## Tables of Flash Points and Kinematic Viscosity Ranges of Goods which have been classified as Flammable Liquids in accordance with Regulation 5, which have a Flash Point of less than 23°C and contain either—

## Not more than 5% of Toxic or Corrosive Substances with a Packing Group of I or II, or not more than 5% of Flammable Liquids with a Packing Group of I and a Subsidiary Hazard of Toxic or Corrosive

| Column 1<br>Flash point | Column 2<br>Kinematic viscosity $\gamma$ (extrapolated at near-zero shear rate) ($mm^2/s$ at 23°C) |
|---|---|
| Above 17°C | $20 < \gamma < 80$ |
| Above 10°C | $80 < \gamma < 135$ |
| Above 5°C | $135 < \gamma < 220$ |
| Above −1°C | $220 < \gamma < 300$ |

| Column 1<br>Flash point | Column 2<br>Kinematic viscosity γ (extrapolated at near-zero shear rate) ($mm^2/s$ at 23°C) |
|---|---|
| Above −5°C | $300 < \gamma < 700$ |
| −5°C and below | $700 < \gamma$ |

# Part V

## Criteria for Ascertaining Packing Groups of Goods which have been classified as Toxic Substances in accordance with Regulation 5

Toxic substances shall be allocated into packing group I, II or III in accordance with the criteria given in the following Table:

| Column 1<br>Packing group | Column 2<br>Oral toxicity $LD_{50}$ (mg/kg) | Column 3<br>Dermal toxicity of $LD_{50}$ (mg/kg) | Column 4<br>Inhalation toxicity of dust or mists $LC_{50}$ ($mg/m^3$) | Column 5<br>Inhalation toxicity of vapours where V is the saturated vapour concentration produced by the substance at 20°C expressed by reference to $LC_{50}$ (ppm) |
|---|---|---|---|---|
| I | < 5 | < 40 | < 500 | $V \surd 10 \times LC_{50}$ and $LC_{50} < 1000$ |
| II | > 5 to < 50 | > 40 to < 200 | > 500 to < 2000 | $V \surd LC_{50}$ and $LC_{50} < 3000$ but not placed in packing group I |
| III | solids: > 50 to < 200<br>liquids: > 50 to < 500 | > 200 to < 1000 | > 2000 to < 10000 | $V \surd 0.2 \times LC_{50}$ and $LC_{50} < 5000$ but not placed in either packing group I or II |

The above criteria are based on $LC_{50}$ data relating to one hour exposure and where such information is available it should be used. However, where only $LC_{50}$ data relating to 4 hour exposures is available, then:

$LC_{50}$ (4 hr) × 4 shall be considered equivalent to $LC_{50}$ (1 hr) for dusts or mists, and
$LC_{50}$ (4 hr) × 2 shall be considered equivalent to $LC_{50}$ (1 hr) for vapours.