Chapter 3.1

General

3.1.1 Scope and general provisions

3.1.1.1 The Dangerous Goods List in chapter 3.2 lists many of the dangerous goods most commonly transported. The list includes entries for specific chemical substances and articles and generic or "not otherwise specified" entries. Since it is not practical to include a separate entry for every chemical substance or article of commercial importance specifically by name, especially names for mixtures and solutions of various chemical constituents and concentrations, the Dangerous Goods List also includes generic or "not otherwise specified" names (e.g. EXTRACTS, FLAVOURING, LIQUID, UN 1197 or FLAMMABLE LIQUID, N.O.S., UN 1993). On this basis, the Dangerous Goods List is intended to include an appropriate name or entry for any dangerous good which may be transported.

3.1.1.2 Where a dangerous good is specifically listed by name in the Dangerous Goods List, it shall be transported in accordance with the provisions in the List which are appropriate for that dangerous good. A generic or "not otherwise specified" entry may be used to permit the transport of substances, materials or articles which do not appear specifically by name in the Dangerous Goods List. Such a dangerous good may be transported only after its dangerous properties have been determined. Dangerous goods shall be classified according to the class definitions, tests and criteria. The name which most appropriately describes the dangerous goods shall be used. Only when the specific name of the dangerous goods does not appear in the Dangerous Goods List or the associated primary or subsidiary hazards assigned to it are not appropriate may a generic or "not otherwise specified" name be used. The classification shall be made by the shipper/consignor or by the appropriate competent authority where so specified in the Code. Once the class of the dangerous good has been so established, all conditions for transport, as provided in this Code, shall be met. Any dangerous good having or suspected of having explosive characteristics shall first be considered for inclusion in class 1. Some collective entries may be of the generic or "not otherwise specified" type provided that the Code contains provisions ensuring safety, both by excluding extremely dangerous goods from normal transport and by covering all subsidiary hazards inherent in some goods.

3.1.1.3 Inherent instability in goods may take different dangerous forms, for example explosion, polymerization with intense evolution of heat or emission of flammable, toxic, corrosive or asphyxiant gases. The Dangerous Goods List indicates that certain dangerous goods, or dangerous goods in a specific form, concentration or state, are prohibited for transport by sea. This means that the goods specified are not suitable for transport by sea under normal conditions of transport. This does not mean that such goods may not be transported under any circumstances. For most goods, such inherent instability can be controlled by suitable packaging, dilution, stabilization, addition of an inhibitor, temperature control or other measures.

3.1.1.4 Where precautionary measures are laid down in the Dangerous Goods List in respect of a given dangerous good (such as that it shall be "stabilized" or "with *x*% water or phlegmatizer"), such dangerous good may not normally be transported when these measures have not been taken, unless the item in question is listed elsewhere (such as class 1) without any indication of, or with different, precautionary measures.

3.1.1.5 Certain substances, by the nature of their chemical composition, tend to polymerize or otherwise react in a dangerous manner under certain conditions of temperature or in contact with a catalyst. Mitigation of this tendency can be carried out either by requiring special transport conditions or by adding adequate amounts of chemical inhibitors or stabilizers to the product. These products shall be sufficiently stabilized to prevent any dangerous reaction during the intended voyage. If this cannot be ensured, the transport of such products is prohibited.

3.1.1.6 Where the contents of a portable tank is to be transported heated, the transport temperature is to be maintained during the intended voyage unless it is established that crystallization or solidification on cooling would not result in instability, which can occur with some stabilized or inhibited products.

3.1.2 Proper shipping names

Note 1: The proper shipping names of the dangerous goods are those listed in chapter 3.2, Dangerous Goods List. Synonyms, secondary names, initials, abbreviations of names, etc. have been included in the Index to facilitate the search for the proper shipping name (see part 5, Consignment procedures).

Note 2: For proper shipping names to be used for transport of samples, see 2.0.4. For proper shipping names to be used for transport of wastes, see 5.4.1.4.3.3.

3.1.2.1 The proper shipping name is that portion of the entry most accurately describing the goods in the Dangerous Goods List, which is shown in upper-case characters (plus any numbers, Greek letters, '*sec*', '*tert*', and the letters *m*, *n*, *o*, *p*, which form an integral part of the name). An alternative proper shipping name may be shown in brackets following the main proper shipping name (such as ETHANOL (ETHYL ALCOHOL)). Portions of an entry appearing in lower case need not be considered as part of the proper shipping name but may be used.

3.1.2.2 When a combination of several distinct proper shipping names are listed under a single UN number, and these are separated by "and" or "or" in lower case or are punctuated by commas, only the most appropriate shall be shown in the transport document and package marks.

Examples illustrating the selection of the proper shipping name for such entries are:

.1 UN 1057 LIGHTERS or LIGHTER REFILLS – The proper shipping name is the most appropriate of the following possible combinations:

LIGHTERS

LIGHTER REFILLS;

.2 UN 2583 ALKYLSULPHONIC ACIDS, SOLID or ARYLSULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid – The proper shipping name is the most appropriate of the following:

ALKYLSULPHONIC ACIDS, SOLID

ARYLSULPHONIC ACIDS, SOLID;

.3 UN 2793 FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS in a form liable to self-heating. The proper shipping name is the most appropriate of the following combinations:

FERROUS METAL BORINGS

FERROUS METAL SHAVINGS

FERROUS METAL TURNINGS

FERROUS METAL CUTTINGS.

3.1.2.3 Proper shipping names may be used in the singular or plural as appropriate. In addition, when qualifying words are used as part of the proper shipping name, their sequence on documentation or packages is optional. Commercial or military names for goods of class 1, which contain the proper shipping name supplemented by additional text, may be used.

3.1.2.4 Many substances have an entry for both the liquid and solid state (see definitions for *liquids* and *solids* in 1.2.1), or for the solid and solution. These are allocated separate UN numbers which are not necessarily adjacent to each other. Details are provided in the alphabetical index, e.g.:

NITROXYLENES, LIQUID	–	6.1	1665
NITROXYLENES, SOLID	–	6.1	3447.

3.1.2.5 Where it is not already included, the qualifying word "MOLTEN" shall be added to the proper shipping name when a substance which is solid in accordance with the definition in 1.2.1 is offered for transport in the molten state (such as ALKYLPHENOL, SOLID, N.O.S., MOLTEN). For elevated temperature substances, see 5.4.1.4.3.4.

3.1.2.6 Except for self-reactive substances and organic peroxides and unless it is already included in capital letters in the name indicated in the Dangerous Goods List, the word STABILIZED shall be added as part of the proper shipping name of the substance which without stabilization would be forbidden from transport in accordance with 1.1.3 due to it being liable to dangerously react under conditions normally encountered in transport (such as TOXIC LIQUID, ORGANIC, N.O.S., STABILIZED). When temperature control is used to stabilize such substances to prevent the development of any dangerous excess pressure, or the evolution of excessive heat, or when chemical stabilization is used in combination with temperature control, then:

.1 For liquids and solids where the SAPT (measured without or with inhibitor, when chemical stabilization is applied) is less than or equal to that prescribed in 2.4.2.5.2, special provision 386 of chapter 3.3 and the provisions of 7.3.7 apply;

.2 Unless it is already included in capital letters in the name indicated in the Dangerous Goods List, the words "TEMPERATURE CONTROLLED" shall be added as part of the proper shipping name;

.3 For gases: the conditions of transport shall be approved by the competent authority.

3.1.2.7 Hydrates may be transported under the proper shipping name for the anhydrous substance.

3.1.2.8 Generic or "not otherwise specified" (N.O.S.) entries

3.1.2.8.1 Generic and "not otherwise specified" proper shipping names that are assigned to special provision 274 or 318 in column 6 of the Dangerous Goods List shall be supplemented with the technical or chemical group names unless a national law or international convention prohibits its disclosure if it is a controlled substance. For explosives of class 1, the dangerous goods description may be supplemented by additional descriptive text to indicate commercial or military names. Technical and chemical group names shall be entered in brackets immediately following the proper shipping name. An appropriate modifier, such as "contains" or "containing" or other qualifying words such as "mixture", "solution", etc., and the percentage of the technical constituent may also be used. For example: "UN 1993 Flammable liquid, n.o.s. (contains xylene and benzene), 3, PG II".

3.1.2.8.1.1 The technical name shall be a recognized chemical or biological name or other name currently used in scientific and technical handbooks, journals and texts. Trade names shall not be used for this purpose. In the case of pesticides, only ISO common name(s), other name(s) in *The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification*, or the name(s) of the active substance(s) may be used.

3.1.2.8.1.2 When a mixture of dangerous goods or articles containing dangerous goods are described by one of the "N.O.S." or "generic" entries to which special provision 274 has been allocated in the Dangerous Goods List, not more than the two constituents which most predominantly contribute to the hazard or hazards of the mixture or of the articles need to be shown, excluding controlled substances when their disclosure is prohibited by national law or international convention. If a package containing a mixture is labelled with any subsidiary hazard label, one of the two technical names shown in brackets shall be the name of the constituent which compels the use of the subsidiary hazard label.

3.1.2.8.1.3 Examples illustrating the selection of the proper shipping name supplemented with the technical name of goods for such N.O.S. entries are:

UN 2902 PESTICIDE, LIQUID, TOXIC, N.O.S. (drazoxolon)

UN 3394 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (trimethylgallium).

UN 3540 ARTICLES CONTAINING FLAMMABLE LIQUID, N.O.S. (pyrrolidine)

3.1.2.9 Marine pollutants

△ **3.1.2.9.1** For the purpose of documentation, the proper shipping name of "not otherwise specified" (N.O.S.) entries which are classified as marine pollutants in accordance with 2.10.3, shall be supplemented with the recognized chemical name of the constituent which most predominantly contributes to the classification as marine pollutant unless otherwise provided by SP274.

△ **3.1.2.9.2** An example illustrating the selection of the proper shipping name supplemented with the recognized technical name of goods for such entries are is indicated below:

UN 1993 FLAMMABLE LIQUID, N.O.S. (propyl acetate, di-*n*-butyltin di-2-ethylhexanoate) class 3 PG III (50°C c.c.) MARINE POLLUTANT

3.1.3 Mixtures or solutions

Note: Where a substance is specifically listed by name in the Dangerous Goods List, it shall be identified in transport by the proper shipping name in the Dangerous Goods List. Such substances may contain technical impurities (for example those deriving from the production process) or additives for stability or other purposes that do not affect their classification. However, a substance listed by name containing technical impurities or additives for stability or other purposes affecting its classification shall be considered a mixture or solution (see 2.0.2.2 and 2.0.2.5).

3.1.3.1 A mixture or solution is not subject to the provisions of this Code if the characteristics, properties, form or physical state of the mixture or solution are such that it does not meet the criteria, including human experience criteria, for inclusion in any class.

3.1.3.2 A mixture or solution meeting the classification criteria of this Code composed of a single predominant substance identified by name in the Dangerous Goods List and one or more substances not subject to the provisions of this Code and/or traces of one or more substances identified by name in the Dangerous Goods List, shall be assigned the UN number and proper shipping name of the predominant substance named in the Dangerous Goods List unless:

.1 the mixture or solution is identified by name in the Dangerous Goods List;

.2 the name and description of the substance named in the Dangerous Goods List specifically indicate that they apply only to the pure substance;

.3 the hazard class or division, subsidiary hazard(s), packing group, or physical state of the mixture or solution is different from that of the substance named in the Dangerous Goods List; or

.4 the hazard characteristics and properties of the mixture or solution necessitate emergency response measures that are different from those required for the substance identified by name in the Dangerous Goods List.

3.1.3.3 Qualifying words such as "MIXTURE" or "SOLUTION", as appropriate, shall be added as part of the proper shipping name, for example, "ACETONE SOLUTION". In addition, the concentration of the mixture or solution may also be indicated after the basic description of the mixture or solution, for example, "ACETONE 75% SOLUTION".

3.1.3.4 A mixture or solution meeting the classification criteria of this Code that is not identified by name in the Dangerous Goods List and that is composed of two or more dangerous goods shall be assigned to an entry that has the proper shipping name, description, hazard class or division, subsidiary hazard(s) and packing group that most precisely describe the mixture or solution.

3.1.4 Segregation groups

3.1.4.1 For the purpose of segregation, dangerous goods having certain similar chemical properties have been grouped together in segregation groups, see 7.2.5.

3.1.4.2 It is recognized that not all substances, mixtures, solutions or preparations falling within a segregation group are listed in the IMDG Code by name. These are shipped under N.O.S. entries. Although these N.O.S. entries are not themselves listed in the segregation groups (see 3.1.4.4), the consignor shall decide whether inclusion under the segregation group is appropriate and, if so, shall mention that fact in the transport document (see 5.4.1.5.11).

3.1.4.3 The segregation groups in this Code do not cover substances which fall outside the classification criteria of the Code. It is recognized that some non-hazardous substances have similar chemical properties as substances listed in the segregation groups. A consignor or the person responsible for packing the goods into a cargo transport unit who does have knowledge of the chemical properties of such non-dangerous goods may decide to implement the segregation provisions of a related segregation group on a voluntary basis.

3.1.4.4 The following segregation groups are identified.

1 Acids (SGG1 or SGG1a)

1052 Hydrogen fluoride, anhydrous*
1182 Ethyl chloroformate
1183 Ethyldichlorosilane
1238 Methyl chloroformate
1242 Methyldichlorosilane
1250 Methyltrichlorosilane
1295 Trichlorosilane
1298 Trimethylchlorosilane
1305 Vinyltrichlorosilane
1572 Cacodylic acid
1595 Dimethyl sulphate
1715 Acetic anhydride
1716 Acetyl bromide
1717 Acetyl chloride
1718 Butyl acid phosphate
1722 Allyl chloroformate
1723 Allyl iodide
1724 Allyltrichlorosilane, stabilized
1725 Aluminium bromide, anhydrous
1726 Aluminium chloride, anhydrous
1727 Ammonium hydrogendifluoride, solid
1728 Amyltrichlorosilane
1729 Anisoyl chloride
1730 Antimony pentachloride, liquid
1731 Antimony pentachloride solution

1732 Antimony pentafluoride
1733 Antimony trichloride
1736 Benzoyl chloride
1737 Benzyl bromide
1738 Benzyl chloride
1739 Benzyl chloroformate
1740 Hydrogendifluorides, n.o.s.
1742 Boron trifluoride acetic acid complex, liquid
1743 Boron trifluoride propionic acid complex, liquid
1744 Bromine or bromine solution
1745 Bromine pentafluoride
1746 Bromine trifluoride
1747 Butyltrichlorosilane
1750 Chloroacetic acid solution
1751 Chloroacetic acid, solid
1752 Chloroacetyl chloride
1753 Chlorophenyltrichlorosilane
1754 Chlorosulphonic acid (with or without sulphur trioxide)
1755 Chromic acid solution
1756 Chromic fluoride, solid
1757 Chromic fluoride solution
1758 Chromium oxychloride
1762 Cyclohexenyltrichlorosilane
1763 Cyclohexyltrichlorosilane
1764 Dichloroacetic acid
1765 Dichloroacetyl chloride
1766 Dichlorophenyltrichlorosilane
1767 Diethyldichlorosilane
1768 Difluorophosphoric acid, anhydrous
1769 Diphenyldichlorosilane
1770 Diphenylmethyl bromide
1771 Dodecyltrichlorosilane
1773 Ferric chloride, anhydrous
1775 Fluoroboric acid
1776 Fluorophosphoric acid, anhydrous
1777 Fluorosulphonic acid*
1778 Fluorosilicic acid
1779 Formic acid with more than 85% acid by mass
1780 Fumaryl chloride
1781 Hexadecyltrichlorosilane
1782 Hexafluorophosphoric acid
1784 Hexyltrichlorosilane
1786 Hydrofluoric acid and sulphuric acid mixture*
1787 Hydriodic acid*
1788 Hydrobromic acid*
1789 Hydrochloric acid*
1790 Hydrofluoric acid*
1792 Iodine monochloride, solid
1793 Isopropyl acid phosphate
1794 Lead sulphate with more than 3% free acid

1796 Nitrating acid mixture*
1798 Nitrohydrochloric acid*
1799 Nonyltrichlorosilane
1800 Octadecyltrichlorosilane
1801 Octyltrichlorosilane
1802 Perchloric acid with not more than 50% acid, by mass*
1803 Phenolsulphonic acid, liquid
1804 Phenyltrichlorosilane
1805 Phosphoric acid, solution
1806 Phosphorus pentachloride
1807 Phosphorus pentoxide
1808 Phosphorus tribromide
1809 Phosphorus trichloride
1810 Phosphorus oxychloride
1811 Potassium hydrogendifluoride, solid
1815 Propionyl chloride
1816 Propyltrichlorosilane
1817 Pyrosulphuryl chloride
1818 Silicon tetrachloride
1826 Nitrating acid mixture, spent*
1827 Stannic chloride, anhydrous
1828 Sulphur chlorides
1829 Sulphur trioxide, inhibited or sulphur trioxide, stabilized
1830 Sulphuric acid with more than 51% acid*
1831 Sulphuric acid, fuming*
1832 Sulphuric acid, spent*
1833 Sulphurous acid
1834 Sulphuryl chloride
1836 Thionyl chloride
1837 Thiophosphoryl chloride
1838 Titanium tetrachloride
1839 Trichloroacetic acid
1840 Zinc chloride solution
1848 Propionic acid with not less than 10% and less than 90% acid, by mass
1873 Perchloric acid with more than 50% but not more than 72% acid, by mass*
1898 Acetyl iodide
1902 Diisooctyl acid phosphate
1905 Selenic acid
1906 Sludge acid*
1938 Bromoacetic acid solution
1939 Phosphorus oxybromide
1940 Thioglycolic acid
2031 Nitric acid, other than red fuming*
2032 Nitric acid, red fuming*
2214 Phthalic anhydride with more than 0.05% of maleic anhydride
2215 Maleic anhydride
2218 Acrylic acid, inhibited
2225 Benzenesulphonyl chloride
2226 Benzotrichloride
2240 Chromosulphuric acid*

2262 Dimethylcarbamoyl chloride
2267 Dimethyl thiophosphoryl chloride
2305 Nitrobenzenesulphonic acid
2308 Nitrosylsulphuric acid, liquid*
2331 Zinc chloride, anhydrous
2353 Butyryl chloride
2395 Isobutyryl chloride
2407 Isopropyl chloroformate
2434 Dibenzyldichlorosilane
2435 Ethylphenyldichlorosilane
2437 Methylphenyldichlorosilane
2438 Trimethylacetyl chloride
2439 Sodium hydrogendifluoride
2440 Stannic chloride pentahydrate
2442 Trichloroacetyl chloride
2443 Vanadium oxytrichloride
2444 Vanadium tetrachloride
2475 Vanadium trichloride
2495 Iodine pentafluoride
2496 Propionic anhydride
2502 Valeryl chloride
2503 Zirconium tetrachloride
2506 Ammonium hydrogen sulphate
2507 Chloroplatinic acid, solid
2508 Molybdenum pentachloride
2509 Potassium hydrogen sulphate
2511 2-Chloropropionic acid
2513 Bromoacetyl bromide
2531 Methacrylic acid, stabilized
2564 Trichloroacetic acid solution
2571 Alkylsulphuric acids
2576 Phosphorus oxybromide, molten
2577 Phenylacetyl chloride
2578 Phosphorus trioxide
2580 Aluminium bromide solution
2581 Aluminium chloride solution
2582 Ferric chloride solution
2583 Alkylsulphonic acids, solid or arylsulphonic acids, solid with more than 5% free sulphuric acid
2584 Alkylsulphonic acids, liquid or arylsulphonic acids, liquid with more than 5% free sulphuric acid
2585 Alkylsulphonic acids, solid or arylsulphonic acids, solid with not more than 5% free sulphuric acid
2586 Alkylsulphonic acids, liquid or arylsulphonic acids, liquid with not more than 5% free sulphuric acid
2604 Boron trifluoride diethyl etherate
2626 Chloric acid, aqueous solution with not more than 10% chloric acid
2642 Fluoroacetic acid
2670 Cyanuric chloride
2691 Phosphorus pentabromide
2692 Boron tribromide
2698 Tetrahydrophthalic anhydrides with more than 0.05% maleic anhydride
2699 Trifluoroacetic acid

2739 Butyric anhydride
2740 Propyl chloroformate
2742 Chloroformates, toxic, corrosive, flammable, n.o.s.
2743 *n*-Butyl chloroformate
2744 Cyclobutyl chloroformate
2745 Chloromethyl chloroformate
2746 Phenyl chloroformate
2748 2-Ethylhexyl chloroformate
2751 Diethylthiophosphoryl chloride
2789 Acetic acid, glacial or acetic acid solution, more than 80% acid, by mass
2790 Acetic acid solution, more than 10% but not more than 80% acid, by mass
2794 Batteries, wet, filled with acid electric storage
2796 Sulphuric acid with not more than 51% acid or battery fluid, acid*
2798 Phenylphosphorus dichloride
2799 Phenylphosphorus thiodichloride
2802 Copper chloride
2817 Ammonium hydrogendifluoride solution
2819 Amyl acid phosphate
2820 Butyric acid
2823 Crotonic acid, solid
2826 Ethyl chlorothioformate
2829 Caproic acid
2834 Phosphorous acid
2851 Boron trifluoride dihydrate
2865 Hydroxylamine sulphate
2869 Titanium trichloride mixture
2879 Selenium oxychloride
2967 Sulphamic acid
2985 Chlorosilanes, flammable, corrosive, n.o.s.
2986 Chlorosilanes, corrosive, flammable, n.o.s.
2987 Chlorosilanes, corrosive, n.o.s.
2988 Chlorosilanes, water-reactive, flammable, corrosive, n.o.s.
3246 Methanesulphonyl chloride
3250 Chloroacetic acid, molten
3260 Corrosive solid, acidic, inorganic, n.o.s.
3261 Corrosive solid, acidic, organic, n.o.s.
3264 Corrosive liquid, acidic, inorganic, n.o.s.
3265 Corrosive liquid, acidic, organic, n.o.s.
3277 Chloroformates, toxic, corrosive, n.o.s.
3361 Chlorosilanes, toxic, corrosive, n.o.s.
3362 Chlorosilanes, toxic, corrosive, flammable, n.o.s.
3412 Formic acid with not less than 10% but not more than 85% acid by mass
3412 Formic acid with not less than 5% but not more than 10% acid by mass
3419 Boron trifluoride acetic acid complex, solid
3420 Boron trifluoride propionic acid complex, solid
3421 Potassium hydrogendifluoride solution
3425 Bromoacetic acid, solid
3453 Phosphoric acid, solid
3456 Nitrosylsulphuric acid, solid
3463 Propionic acid with not less than 90% acid by mass

3472 Crotonic acid, liquid
3498 Iodine monochloride, liquid
* identifies strong acids

2 **Ammonium compounds (SGG2)**
0004 Ammonium picrate dry or wetted with less than 10% water, by mass
0222 Ammonium nitrate, with more than 0.2% combustible substances
0402 Ammonium perchlorate
1310 Ammonium picrate, wetted with not less than 10% water, by mass
1439 Ammonium dichromate
1442 Ammonium perchlorate
1444 Ammonium persulphate
1546 Ammonium arsenate
1630 Mercury ammonium chloride
1727 Ammonium hydrogendifluoride, solid
1835 Tetramethylammonium hydroxide solution
1843 Ammonium dinitro-*o*-cresolate, solid
1942 Ammonium nitrate with not more than 0.2% combustible substances
2067 Ammonium nitrate based fertilizer
2071 Ammonium nitrate based fertilizer
2073 Ammonia solution, relative density less than 0.880 at 15°C in water, with more than 35% but not more than 50% ammonia
2426 Ammonium nitrate, liquid (hot concentrated solution)
2505 Ammonium fluoride
2506 Ammonium hydrogen sulphate
2683 Ammonium sulphide solution
2687 Dicyclohexylammonium nitrite
2817 Ammonium hydrogendifluoride solution
2818 Ammonium polysulphide solution
2854 Ammonium fluorosilicate
2859 Ammonium metavanadate
2861 Ammonium polyvanadate
2863 Sodium ammonium vanadate
3375 Ammonium nitrate emulsion or suspension or gel, intermediate for blasting explosives
3423 Tetramethylammonium hydroxide, solid
3424 Ammonium dinitro-*o*-cresolate solution

3 **Bromates (SGG3)**
1450 Bromates, inorganic, n.o.s.
1473 Magnesium bromate
1484 Potassium bromate
1494 Sodium bromate
2469 Zinc bromate
2719 Barium bromate
3213 Bromates, inorganic, aqueous solution, n.o.s.

4 **Chlorates (SGG4)**
1445 Barium chlorate, solid
1452 Calcium chlorate
1458 Chlorate and borate mixture
1459 Chlorate and magnesium chloride mixture, solid
1461 Chlorates, inorganic, n.o.s.
1485 Potassium chlorate

1495 Sodium chlorate
1506 Strontium chlorate
1513 Zinc chlorate
2427 Potassium chlorate, aqueous solution
2428 Sodium chlorate, aqueous solution
2429 Calcium chlorate, aqueous solution
2573 Thallium chlorate
2721 Copper chlorate
2723 Magnesium chlorate
3405 Barium chlorate solution
3407 Chlorate and magnesium chloride mixture solution

5 Chlorites (SGG5)

1453 Calcium chlorite
1462 Chlorites, inorganic, n.o.s.
1496 Sodium chlorite
1908 Chlorite solution

6 Cyanides (SGG6)

1541 Acetone cyanhydrin, stabilized
1565 Barium cyanide
1575 Calcium cyanide
1587 Copper cyanide
1588 Cyanides, inorganic, solid, n.o.s.
1620 Lead cyanide
1626 Mercuric potassium cyanide
1636 Mercury cyanide
1642 Mercury oxycyanide, desensitized
1653 Nickel cyanide
1679 Potassium cuprocyanide
1680 Potassium cyanide, solid
1684 Silver cyanide
1689 Sodium cyanide, solid
1694 Bromobenzyl cyanides, liquid
1713 Zinc cyanide
1889 Cyanogen bromide
1935 Cyanide solution, n.o.s.
2205 Adiponitrile
2316 Sodium cuprocyanide, solid
2317 Sodium cuprocyanide solution
3413 Potassium cyanide solution
3414 Sodium cyanide solution
3449 Bromobenzyl cyanides, solid

7 Heavy metals and their salts (including their organometallic compounds) (SGG7)

0129 Lead azide, wetted, with not less than 20% water, or mixture of alcohol and water, by mass
0130 Lead styphnate (lead trinitroresorcinate), wetted with not less than 20% water, or mixture of alcohol and water, by mass
0135 Mercury fulminate, wetted with not less than 20% water, or mixture of alcohol and water, by mass
1347 Silver picrate, wetted with not less than 30% water, by mass
1389 Alkali metal amalgam, liquid
1392 Alkaline earth metal amalgam, liquid

1435	Zinc ashes
1436	Zinc dust or zinc powder
1469	Lead nitrate
1470	Lead perchlorate, solid
1493	Silver nitrate
1513	Zinc chlorate
1514	Zinc nitrate
1515	Zinc permanganate
1516	Zinc peroxide
1587	Copper cyanide
1616	Lead acetate
1617	Lead arsenates
1618	Lead arsenites
1620	Lead cyanide
1623	Mercuric arsenate
1624	Mercuric chloride
1625	Mercuric nitrate
1626	Mercuric potassium cyanide
1627	Mercurous nitrate
1629	Mercury acetate
1630	Mercury ammonium chloride
1631	Mercury benzoate
1634	Mercury bromides
1636	Mercury cyanide
1637	Mercury gluconate
1638	Mercury iodide
1639	Mercury nucleate
1640	Mercury oleate
1641	Mercury oxide
1642	Mercury oxycyanide, desensitized
1643	Mercury potassium iodide
1644	Mercury salicylate
1645	Mercury sulphate
1646	Mercury thiocyanate
1649	Motor fuel anti-knock mixture
1653	Nickel cyanide
1674	Phenylmercuric acetate
1683	Silver arsenite
1684	Silver cyanide
1712	Zinc arsenate and zinc arsenite mixture
1713	Zinc cyanide
1714	Zinc phosphide
1794	Lead sulphate with more than 3% free acid
1838	Titanium tetrachloride
1840	Zinc chloride solution
1872	Lead dioxide
1894	Phenylmercuric hydroxide
1895	Phenylmercuric nitrate
1931	Zinc dithionite
1931	Zinc hydrosulphite

2024 Mercury compound, liquid, n.o.s.
2025 Mercury compound, solid, n.o.s.
2026 Phenylmercuric compound, n.o.s.
2291 Lead compound, soluble, n.o.s.
2331 Zinc chloride, anhydrous
2441 Titanium trichloride, pyrophoric or titanium trichloride mixture, pyrophoric
2469 Zinc bromate
2546 Titanium powder, dry
2714 Zinc resinate
2777 Mercury based pesticide, solid, toxic
2778 Mercury based pesticide, liquid, flammable, toxic
2809 Mercury
2855 Zinc fluorosilicate
2869 Titanium trichloride mixture
2878 Titanium, sponge granules or titanium, sponge powders
2881 Metal catalyst, dry
2989 Lead phosphite, dibasic
3011 Mercury based pesticide, liquid, toxic, flammable
3012 Mercury based pesticide, liquid, toxic
3089 Metal powder, flammable, n.o.s.
3174 Titanium disulphide
3181 Metal salts of organic compounds, flammable, n.o.s.
3189 Metal powder, self-heating, n.o.s.
3401 Alkali metal amalgam, solid
3402 Alkaline earth metal amalgam, solid
3408 Lead perchlorate solution
3483 Motor fuel anti-knock mixture, flammable

8 **Hypochlorites (SGG8)**

1471 Lithium hypochlorite
1748 Calcium hypochlorite, dry or calcium hypochlorite mixture, dry with more than 39% available chlorine (8.8% available oxygen)
1791 Hypochlorite solution
2208 Calcium hypochlorite mixture, dry with more than 10% but not more than 39% available chlorine
2741 Barium hypochlorite with more than 22% available chlorine
2880 Calcium hypochlorite, hydrated or calcium hypochlorite, hydrated mixture with not less than 5.5% but not more than 16% water
3212 Hypochlorites, inorganic, n.o.s.
3255 *tert*-Butyl hypochlorite
3485 Calcium hypochlorite, dry, corrosive or calcium hypochlorite mixture, dry, corrosive with more than 39% available chlorine (8.8% available oxygen)
3486 Calcium hypochlorite mixture, dry, corrosive with more than 10% but not more than 39% available chlorine
3487 Calcium hypochlorite, hydrated, corrosive or calcium hypochlorite, hydrated mixture, corrosive, with not less than 5.5% but not more than 16% water

9 **Lead and its compounds (SGG9)**

0129 Lead azide, wetted with not less than 20% water, or mixture of alcohol and water, by mass
0130 Lead styphnate, wetted with not less than 20% water, or mixture of alcohol and water, by mass
0130 Lead trinitroresorcinate, wetted with not less than 20% water, or mixture of alcohol and water, by mass
1469 Lead nitrate

1470 Lead perchlorate, solid
1616 Lead acetate
1617 Lead arsenates
1618 Lead arsenites
1620 Lead cyanide
1649 Motor fuel anti-knock mixture
1794 Lead sulphate with more than 3% free acid
1872 Lead dioxide
2291 Lead compound, soluble, n.o.s.
2989 Lead phosphide, dibasic
3408 Lead perchlorate solution
3483 Motor fuel anti-knock mixture, flammable

10 Liquid halogenated hydrocarbons (SGG10)

1099 Allyl bromide
1100 Allyl chloride
1107 Amyl chloride
1126 1-Bromobutane
1127 Chlorobutanes
1134 Chlorobenzene
1150 1,2-Dichloroethylene
1152 Dichloropentanes
1184 Ethylene dichloride
1278 1-Chloropropane
1279 1,2-Dichloropropane
1303 Vinylidene chloride, stabilized
1591 *o*-Dichlorobenzene
1593 Dichloromethane
1605 Ethylene dibromide
1647 Methyl bromide and ethylene dibromide mixture, liquid
1669 Pentachloroethane
1701 Xylyl bromide
1702 1,1,2,2-Tetrachloroethane
1710 Trichloroethylene
1723 Allyl iodide
1737 Benzyl bromide
1738 Benzyl chloride
1846 Carbon tetrachloride
1887 Bromochloromethane
1888 Chloroform
1891 Ethyl bromide
1897 Tetrachloroethylene
1991 Chloroprene, stabilized
2234 Chlorobenzotrifluorides
2238 Chlorotoluenes
2279 Hexachlorobutadiene
2321 Trichlorobenzenes, liquid
2322 Trichlorobutene
2339 2-Bromobutane
2341 1-Bromo-3-methylbutane
2342 Bromomethylpropanes

2343 2-Bromopentane
2344 Bromopropanes
2356 2-Chloropropane
2362 1,1-Dichloroethane
2387 Fluorobenzene
2388 Fluorotoluenes
2390 2-Iodobutane
2391 Iodomethylpropanes
2392 Iodopropanes
2456 2-Chloropropene
2504 Tetrabromoethane
2515 Bromoform
2554 Methylallyl chloride
2644 Methyl iodide
2646 Hexachlorocyclopentadiene
2664 Dibromomethane
2688 1-Bromo-3-chloropropane
2831 1,1,1-Trichloroethane
2872 Dibromochloropropanes

11 Mercury and mercury compounds (SGG11)

0135 Mercury fulminate, wetted with not less than 20% water, or mixture of alcohol and water, by mass
1389 Alkali metal amalgam, liquid
1392 Alkaline earth metal amalgam, liquid
1623 Mercuric arsenate
1624 Mercuric chloride
1625 Mercuric nitrate
1626 Mercuric potassium cyanide
1627 Mercurous nitrate
1629 Mercury acetate
1630 Mercury ammonium chloride
1631 Mercury benzoate
1634 Mercury bromides
1636 Mercury cyanide
1637 Mercury gluconate
1638 Mercury iodide
1639 Mercury nucleate
1640 Mercury oleate
1641 Mercury oxide
1642 Mercury oxycyanide, desensitized
1643 Mercury potassium iodide
1644 Mercury salicylate
1645 Mercury sulphate
1646 Mercury thiocyanate
1894 Phenylmercuric hydroxide
1895 Phenylmercuric nitrate
2024 Mercury compound, liquid, n.o.s.
2025 Mercury compound, solid, n.o.s.
2026 Phenylmercuric compound, n.o.s.
2777 Mercury based pesticide, solid, toxic

2778 Mercury based pesticide, liquid, flammable, toxic
2809 Mercury
3011 Mercury based pesticide, liquid, toxic, flammable
3012 Mercury based pesticide, liquid, toxic
3401 Alkali metal amalgam, solid
3402 Alkaline earth metal amalgam, solid

12 Nitrites and their mixtures (SGG12)

1487 Potassium nitrate and sodium nitrite mixture
1488 Potassium nitrite
1500 Sodium nitrite
2627 Nitrites, inorganic, n.o.s.
2726 Nickel nitrite
3219 Nitrites, inorganic, aqueous solution, n.o.s

13 Perchlorates (SGG13)

1442 Ammonium perchlorate
1447 Barium perchlorate, solid
1455 Calcium perchlorate
1470 Lead perchlorate, solid
1475 Magnesium perchlorate
1481 Perchlorates, inorganic, n.o.s.
1489 Potassium perchlorate
1502 Sodium perchlorate
1508 Strontium perchlorate
3211 Perchlorates, inorganic, aqueous solution, n.o.s.
3406 Barium perchlorate solution
3408 Lead perchlorate solution

14 Permanganates (SGG14)

1448 Barium permanganate
1456 Calcium permanganate
1482 Permanganates, inorganic, n.o.s.
1490 Potassium permanganate
1503 Sodium permanganate
1515 Zinc permanganate
3214 Permanganates, inorganic, aqueous solution, n.o.s.

15 Powdered metals (SGG15)

1309 Aluminium powder, coated
1326 Hafnium powder, wetted with not less than 25% water
1352 Titanium powder, wetted with not less than 25% water
1358 Zirconium powder, wetted with not less than 25% water
1383 Pyrophoric alloy or pyrophoric metal, n.o.s.
1396 Aluminium powder, uncoated
1398 Aluminium silicon powder, uncoated
1418 Magnesium powder or magnesium alloys powder
1435 Zinc ashes
1436 Zinc dust or zinc powder
1854 Barium alloys, pyrophoric
2008 Zirconium powder, dry
2009 Zirconium, dry, sheets, strip or coiled wire
2545 Hafnium powder, dry
2546 Titanium powder, dry

2878 Titanium sponge powders
2881 Metal catalyst, dry
2950 Magnesium granules, coated, particle size not less than 149 microns
3078 Cerium, turnings or gritty powder
3089 Metal powder, flammable, n.o.s.
3170 Aluminium smelting by-products or aluminium remelting by-products
3189 Metal powder, self-heating, n.o.s.

16 Peroxides (SGG16)

1449 Barium peroxide
1457 Calcium peroxide
1472 Lithium peroxide
1476 Magnesium peroxide
1483 Peroxides, inorganic, n.o.s.
1491 Potassium peroxide
1504 Sodium peroxide
1509 Strontium peroxide
1516 Zinc peroxide
2014 Hydrogen peroxide, aqueous solution, 20–60%
2015 Hydrogen peroxide, aqueous solution, stabilized
2466 Potassium superoxide
2547 Sodium superoxide
3149 Hydrogen peroxide and peroxyacetic acid mixture
3377 Sodium perborate monohydrate
3378 Sodium carbonate peroxyhydrate

17 Azides (SGG17)

0129 Lead azide, wetted with not less than 20% water, or mixture of alcohol and water, by mass
0224 Barium azide, dry or wetted with less than 50% water, by mass
1571 Barium azide, wetted with not less than 50% water, by mass
1687 Sodium azide

18 Alkalis (SGG18)

1005 Ammonia, anhydrous
1160 Dimethylamine, aqueous solution
1163 Dimethylhydrazine, unsymmetrical
1235 Methylamine, aqueous solution
1244 Methylhydrazine
■ 1289 Sodium methylate solution in alcohol
1382 Potassium sulphide, anhydrous or potassium sulphide with less than 30% water of crystallization
1385 Sodium sulphide, anhydrous or sodium sulphide with less than 30% water of crystallization
■ 1431 Sodium methylate
1604 Ethylenediamine
1719 Caustic alkali liquid, n.o.s.
1813 Potassium hydroxide, solid
1814 Potassium hydroxide solution
1819 Sodium aluminate solution
1823 Sodium hydroxide, solid
1824 Sodium hydroxide solution
1825 Sodium monoxide
1835 Tetramethylammonium hydroxide solution
1847 Potassium sulphide, hydrated with not less than 30% water of crystallization
1849 Sodium sulphide, hydrated with not less than 30% water

	1907	Soda lime with more than 4% sodium hydroxide
	1922	Pyrrolidine
	2029	Hydrazine, anhydrous
	2030	Hydrazine, aqueous solution with more than 37% hydrazine, by mass
	2033	Potassium monoxide
	2073	Ammonia solution, relative density less than 0.880 at 15°C in water, with more than 35% but not more than 50% ammonia
	2079	Diethylenetriamine
	2259	Triethylenetetramine
	2270	Ethylamine, aqueous solution, with not less than 50% but not more than 70% ethylamine
	2318	Sodium hydrosulphide with less than 25% water of crystallization
	2320	Tetraethylenepentamine
	2379	1,3-Dimethylbutylamine
	2382	Dimethylhydrazine, symmetrical
	2386	1-Ethylpiperidine
	2399	1-Methylpiperidine
	2401	Piperidine
	2491	Ethanolamine or ethanolamine solution
	2579	Piperazine
	2671	Aminopyridines (*o*-, *m*-, *p*-)
	2672	Ammonia solution relative density between 0.880 and 0.957 at 15°C in water, with more than 10% but not more than 35% ammonia, by mass
	2677	Rubidium hydroxide solution
	2678	Rubidium hydroxide
	2679	Lithium hydroxide solution
	2680	Lithium hydroxide
	2681	Caesium hydroxide solution
	2682	Caesium hydroxide
	2683	Ammonium sulphide solution
	2733	Amines, flammable, corrosive, n.o.s. or polyamines, flammable, corrosive, n.o.s.
	2734	Amines, liquid, corrosive, flammable, n.o.s. or polyamines, liquid, corrosive, flammable, n.o.s.
	2735	Amines, liquid, corrosive, n.o.s. or polyamines, liquid, corrosive, n.o.s.
	2795	Batteries, wet, filled with alkali, electric storage
	2797	Battery fluid, alkali
	2818	Ammonium polysulphide solution
	2949	Sodium hydrosulphide, hydrated with not less than 25% water of crystallization
	3028	Batteries, dry, containing potassium hydroxide, solid electric storage
	3073	Vinylpyridines, stabilized
■	3206	Alkali metal alcoholates, self-heating, corrosive, n.o.s.
	3253	Disodium trioxosilicate
	3259	Amines, solid, corrosive, n.o.s. or polyamines, solid, corrosive, n.o.s.
	3262	Corrosive solid, basic, inorganic, n.o.s.
	3263	Corrosive solid, basic, organic, n.o.s.
	3266	Corrosive liquid, basic, inorganic, n.o.s.
	3267	Corrosive liquid, basic, organic, n.o.s.
■	3274	Alcoholates solution, n.o.s. in alcohol
	3293	Hydrazine, aqueous solution with not more than 37% hydrazine, by mass
	3318	Ammonia solution, relative density less than 0.880 at 15°C in water, with more than 50% ammonia
	3320	Sodium borohydride and sodium hydroxide solution with not more than 12% sodium borohydride and not more than 40% sodium hydroxide, by mass

3423 Tetramethylammonium hydroxide, solid

3484 Hydrazine aqueous solution, flammable, with more than 37% hydrazine, by mass