

## Chapter 1.2

### *Definitions, units of measurement and abbreviations*

#### 1.2.1 Definitions

The following is a list of definitions of general applicability that are used throughout this Code. Additional definitions of a highly specific nature are presented in the relevant chapters.

For the purposes of this Code:

*Aerosols or aerosol dispensers* means an article consisting of non-refillable receptacles meeting the provisions of 6.2.4, made of metal, glass or plastics and containing a gas compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state.

*Alternative arrangement* means an approval granted by the competent authority for a portable tank or MEGC that has been designed, constructed or tested to technical requirements or testing methods other than those specified in this Code (see, for instance, 6.7.5.11.1).

*Animal material* means animal carcasses, animal body parts, foodstuffs or feedstuffs derived from animals.

*Approval*

*Multilateral approval*, for the transport of radioactive material, means approval by the relevant competent authority of the country of origin of the design or shipment, as applicable, and also, where the consignment is to be transported through or into any other country, approval by the competent authority of that country.

*Unilateral approval*, for the transport of radioactive material, means an approval of a design which is required to be given by the competent authority of the country of origin of the design only.

*Bags* means flexible packagings made of paper, plastic film, textiles, woven material, or other suitable materials.

*Barge-carrying ship* means a ship specially designed and equipped to transport shipborne barges.

*Barge feeder vessel* means a vessel specially designed and equipped to transport shipborne barges to or from a barge-carrying ship.

*Boxes* means packagings with complete rectangular or polygonal faces, made of metal, wood, plywood, reconstituted wood, fibreboard, plastics, or other suitable material. Small holes for purposes such as ease of the handling or opening of the box or to meet classification provisions are permitted as long as they do not compromise the integrity of the packaging during transport.

*Bulk containers* are containment systems (including any liner or coating) intended for the transport of solid substances which are in direct contact with the containment system. Packagings, intermediate bulk containers (IBCs), large packagings and portable tanks are not included.

Bulk containers:

- are of a permanent character and accordingly strong enough to be suitable for repeated use;
- are specially designed to facilitate the transport of goods by one or more means of transport without intermediate reloading;
- are fitted with devices permitting ready handling; and
- have a capacity of not less than 1 cubic metre.

Examples of bulk containers are freight containers, offshore bulk containers, skips, bulk bins, swap bodies, trough-shaped containers, roller containers, load compartments of vehicles or flexible bulk containers.

*Bundles of cylinders* are assemblies of cylinders that are fastened together and which are interconnected by a manifold and transported as a unit. The total water capacity shall not exceed 3,000 L except that bundles intended for the transport of gases of class 2.3 shall be limited to 1,000 L water capacity.

*Cargo transport unit* means a road transport tank or freight vehicle, a railway transport tank or freight wagon, a multimodal freight container or portable tank, or an MEGC.

*Carrier* means any person, organization or Government undertaking the transport of dangerous goods by any means of transport. The term includes both carriers for hire or reward (known as *common* or *contract carriers* in some countries) and carriers on own account (known as *private carriers* in some countries).

*Cellular ship* means a ship in which containers are loaded under deck into specially designed slots giving a permanent stowage of the container during sea transport. Containers loaded on deck in such a ship are specially stacked and secured on fittings.

*Closed cargo transport unit*, with the exception of class 1, means a cargo transport unit which totally encloses the contents by permanent structures with complete and rigid surfaces. Cargo transport units with fabric sides or tops are not considered closed cargo transport units; for definition of closed cargo transport unit for class 1, see 7.1.2.

*Closed ro-ro cargo space* means a ro-ro cargo space which is neither an open ro-ro cargo space nor a weather deck.

*Closure* means a device which closes an opening in a receptacle.

*Combination packagings* means a combination of packagings for transport purposes, consisting of one or more inner packagings secured in an outer packaging in accordance with 4.1.1.5.

*Competent authority* means any body or authority designated or otherwise recognized as such for any purpose in connection with this Code.

*Compliance assurance* means a systematic programme of measures applied by a competent authority which is aimed at ensuring that the provisions of this Code are met in practice.

*Composite packagings* means packagings consisting of an outer packaging and an inner receptacle so constructed that the inner receptacle and the outer packaging form an integral packaging. Once assembled, it remains thereafter an integrated single unit; it is filled, stored, transported and emptied as such.

*Confinement system*, for the transport of radioactive material, means the assembly of fissile material and packaging components specified by the designer and agreed to by the competent authority as intended to preserve criticality safety.

*Consignee* means any person, organization or Government which is entitled to take delivery of a consignment.

*Consignment* means any package or packages, or load of dangerous goods, presented by a consignor for transport.

*Consignor* means any person, organization or Government which prepares a consignment for transport.

*Containment system*, for the transport of radioactive material, means the assembly of components of the packaging specified by the designer as intended to retain the radioactive material during transport.

*Control temperature* means the maximum temperature at which certain substances (such as organic peroxides and self-reactive and related substances) can be safely transported during a prolonged period of time.

*Conveyance* means:

- .1 for transport by road or rail: any vehicle,
- .2 for transport by water: any ship, or any cargo space or defined deck area of a ship,
- .3 for transport by air: any aircraft.

*Crates* are outer packagings with incomplete surfaces.

*Criticality safety index (CSI) assigned to a package, overpack or freight container containing fissile material*, for the transport of radioactive material, means a number which is used to provide control over the accumulation of packages, overpacks or freight containers containing fissile material.

*Critical temperature* is the temperature above which the substance cannot exist in the liquid state.

*Cryogenic receptacles* are transportable thermally insulated receptacles for refrigerated liquefied gases, of a water capacity of not more than 1,000 L.

*CTU Code* means the IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units (MSC.1/Circ.1497).\*

\* Further practical guidance and background information related to the CTU Code are available as informative material (MSC.1/Circ.1498). The CTU Code and the Informative Material may be found at [www.unece.org/trans/wp24/guidelinespackingctus/intro.html](http://www.unece.org/trans/wp24/guidelinespackingctus/intro.html).

*Cylinders* are transportable pressure receptacles of a water capacity not exceeding 150 L.

*Defined deck area* means the area, of the weather deck of a ship, or of a vehicle deck of a roll-on/roll-off ship, which is allocated for the stowage of dangerous goods.

*Design*, for the transport of radioactive material, means the description of fissile material excepted under 2.7.2.3.5.6, special form radioactive material, low dispersible radioactive material, package or packaging which enables such an item to be fully identified. The description may include specifications, engineering drawings, reports demonstrating compliance with regulatory requirements, and other relevant documentation.

*Design life*, for composite cylinders and tubes, means the maximum life (in number of years) to which the cylinder or tube is designed and approved in accordance with the applicable standard.

- *Dose rate* means the ambient dose equivalent or the directional dose equivalent, as appropriate, per unit time, measured at the point of interest.

*Drums* means flat-ended or convex-ended cylindrical packagings made of metal, fibreboard, plastics, plywood or other suitable materials. This definition also includes packagings of other shapes, such as round taper-necked packagings, or pail-shaped packagings. Wooden barrels and jerricans are not covered by this definition.

*Elevated temperature substance* means a substance which is transported or offered for transport:

- in the liquid state at a temperature at or above 100°C
- in the liquid state with a flashpoint above 60°C that is intentionally heated to a temperature above its flashpoint; or
- in the solid state at a temperature at or above 240°C.

*Emergency temperature* means the temperature at which emergency procedures shall be implemented.

*Exclusive use*, for the transport of radioactive material, means the sole use, by a single consignor, of a conveyance or of a large freight container, in respect of which all initial, intermediate and final loading and unloading and shipment are carried out in accordance with the directions of the consignor or consignee, where so required by the provisions of this Code.

*Filling ratio* means the ratio of the mass of gas to the mass of water at 15°C that would fill completely a pressure receptacle fitted ready for use.

*Flashpoint* means the lowest temperature of a liquid at which its vapour forms an ignitable mixture with air.

*Foodstuff* includes foodstuffs, feeds or other edible substances intended for consumption by humans or animals.

*Freight container* means an article of transport equipment that is of a permanent character and accordingly strong enough to be suitable for repeated use; specially designed to facilitate the transport of goods, by one or more modes of transport, without intermediate reloading; designed to be secured and/or readily handled, having fittings for these purposes, and approved in accordance with the *International Convention for Safe Containers, 1972* (CSC Convention), as amended. In addition: *Small freight container* means a freight container that has an internal volume of not more than 3 m<sup>3</sup>. *Large freight container* means a freight container that has an internal volume of more than 3 m<sup>3</sup>.

For freight containers for the transport of radioactive material, a freight container may be used as a packaging. A small freight container is that which has either any overall outer dimension less than 1.5 m, or an internal volume of not more than 3 m<sup>3</sup>. Any other freight container is considered to be a large freight container.

*Fuel cell* means an electrochemical device that converts the chemical energy of a fuel to electrical energy, heat and reaction products.

*Fuel cell engine* means a device used to power equipment and which consists of a fuel cell and its fuel supply, whether integrated with or separate from the fuel cell, and includes all appurtenances necessary to fulfil its function.

- △ *GHS* means the eighth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals*, published by the United Nations as document ST/SG/AC.10/30/Rev.8.

*IMO type 4 tank* means a road tank vehicle for the transport of dangerous goods of classes 3 to 9 and includes a semi-trailer with a permanently attached tank or a tank attached to a chassis, with at least four twist locks that take account of ISO standards (e.g. ISO 1161:1984).

*IMO type 6 tank* means a road tank vehicle for the transport of non-refrigerated liquefied gases of class 2 and includes a semi-trailer with a permanently attached tank or a tank attached to a chassis which is fitted with items of service equipment and structural equipment necessary for the transport of gases.

*IMO type 8 tank* means a road tank vehicle for the transport of refrigerated liquefied gases of class 2 and includes a semi-trailer with a permanently attached thermally insulated tank fitted with items of service equipment and structural equipment necessary for the transport of refrigerated liquefied gases.

*IMO type 9 tank* means a road gas elements vehicle for the transport of compressed gases of class 2 with elements linked to each other by a manifold, permanently attached to a chassis, which is fitted with items of service equipment and structural equipment necessary for the transport of gases. Elements are cylinders, tubes and bundles of cylinders, intended for the transport of gases as defined in 2.2.1.1.

*Inner packagings* means packagings for which an outer packaging is required for transport.

*Inner receptacles* means receptacles which require an outer packaging in order to perform their containment function.

*Inspection body* means an independent inspection and testing body approved by the competent authority.

*Intermediate bulk containers (IBCs)* means rigid or flexible portable packagings, other than specified in chapter 6.1, that:

- .1 have a capacity of:
  - .1 not more than 3.0 m<sup>3</sup> (3,000 L) for solids and liquids of packing groups II and III;
  - .2 not more than 1.5 m<sup>3</sup> for solids of packing group I when packed in flexible, rigid plastics, composite, fibreboard or wooden IBCs;
  - .3 not more than 3.0 m<sup>3</sup> for solids of packing group I when packed in metal IBCs;
  - .4 not more than 3.0 m<sup>3</sup> for radioactive material of class 7;
- .2 are designed for mechanical handling; and
- .3 are resistant to the stresses produced in handling and transport, as determined by tests.

*Remanufactured IBCs* are metal, rigid plastics or composite IBCs that:

- .1 are produced as a UN type from a non-UN type; or
- .2 are converted from one UN design type to another UN design type.

Remanufactured IBCs are subject to the same provisions of this Code that apply to new IBCs of the same type (see also design type definition in 6.5.6.1.1).

*Repaired IBCs* are metal, rigid plastics or composite IBCs that, as a result of impact or for any other cause (e.g. corrosion, embrittlement or other evidence of reduced strength as compared to the design type) are restored so as to conform to the design type and to be able to withstand the design type tests. For the purposes of this Code, the replacement of the rigid inner receptacle of a composite IBC with a receptacle conforming to the original design type from the same manufacturer is considered repair. However, routine maintenance of rigid IBCs (see definition below) is not considered repair. The bodies of rigid plastics IBCs and the inner receptacles of composite IBCs are not repairable. Flexible IBCs are not repairable, unless approved by the competent authority.

*Routine maintenance of flexible IBCs* is the routine performance on plastics or textile flexible IBCs of operations, such as:

- .1 cleaning; or
- .2 replacement of non-integral components, such as non-integral liners and closure ties, with components conforming to the original manufacturer's specification;

provided that these operations do not adversely affect the containment function of the flexible IBC or alter the design type.

**Note:** For rigid IBCs, see "Routine maintenance of rigid IBCs".

*Routine maintenance of rigid IBCs* is the routine performance on metal, rigid plastics or composite IBCs of operations such as:

- .1 cleaning;
- .2 removal and reinstallation or replacement of body closures (including associated gaskets), or of service equipment, conforming to the original manufacturer's specifications, provided that the leaktightness of the IBC is verified; or
- .3 restoration of structural equipment not directly performing a dangerous goods containment or discharge pressure retention function so as to conform to the design type (e.g. the straightening of legs or lifting attachments) provided that the containment function of the IBC is not affected.

**Note:** For flexible IBCs, see "Routine maintenance of flexible IBCs".

*Intermediate packagings* means packagings placed between inner packagings, or articles, and an outer packaging.

*Jerricans* means metal or plastics packagings of rectangular or polygonal cross-section.

*Large packagings* means packagings consisting of an outer packaging which contains articles or inner packagings and which:

- .1 are designed for mechanical handling; and
- .2 exceed 400 kg net mass or 450 L capacity but have a volume of not more than 3 m<sup>3</sup>.

*Large salvage packaging* means a special packaging which:

- .1 is designed for mechanical handling; and
- .2 exceeds 400 kg net mass or 450 L capacity but has a volume of not more than 3 m<sup>3</sup>;

into which damaged, defective, leaking or non-conforming dangerous goods packages, or dangerous goods that have spilled or leaked are placed for purposes of transport for recovery or disposal.

*Liner* means a separate tube or bag inserted into a packaging (including IBCs and large packagings) but not forming an integral part of it, including the closures of its openings.

*Liquids* are dangerous goods which at 50°C have a vapour pressure of not more than 300 kPa (3 bar), which are not completely gaseous at 20°C and at a pressure of 101.3 kPa, and which have a melting point or initial melting point of 20°C or less at a pressure of 101.3 kPa. A viscous substance for which a specific melting point cannot be determined shall be subjected to the ASTM D 4359-90 test; or to the test for determining fluidity (penetrometer test) prescribed in section 2.3.4 of Annex A of the European Agreement concerning the *International Carriage of Dangerous Goods by Road* (ADR).\*

*Long international voyage* means an international voyage that is not a short international voyage.

*Management system*, for the transport of radioactive material, means a set of interrelated or interacting elements (system) for establishing policies and objectives and enabling the objectives to be achieved in an efficient and effective manner.

- △ *Manual of Tests and Criteria* means the **seventh** revised edition of the United Nations publication entitled *Manual of Tests and Criteria* (ST/SG/AC.10/11/Rev.7).

*Maximum capacity* as used in 6.1.4 means the maximum inner volume of receptacles or packagings expressed in litres.

*Maximum net mass* as used in 6.1.4 means the maximum net mass of contents in a single packaging or maximum combined mass of inner packagings and the contents thereof and is expressed in kilograms.

*Maximum normal operating pressure*, for the transport of radioactive material, means the maximum pressure above atmospheric pressure at mean sea-level that would develop in the containment system in a period of one year under the conditions of temperature and solar radiation corresponding to environmental conditions in the absence of venting, external cooling by an ancillary system, or operational controls during transport.

*Metal hydride storage system* means a single complete hydrogen storage system, including a receptacle, metal hydride, pressure relief device, shut-off valve, service equipment and internal components used for the transport of hydrogen only.

*Multiple-element gas containers* (MEGCs) are multimodal assemblies of cylinders, tubes or bundles of cylinders which are interconnected by a manifold and which are assembled within a framework. The MEGC includes service equipment and structural equipment necessary for the transport of gases.

*Net explosive mass* (NEM) means the total mass of the explosive substances, without the packagings, casings, etc. (*Net explosive quantity* (NEQ), *net explosive contents* (NEC), or *net explosive weight* (NEW) are often used to convey the same meaning.)

*Neutron radiation detector* is a device that detects neutron radiation. In such a device, a gas may be contained in a hermetically-sealed electron tube transducer that converts neutron radiation into a measureable electric signal.

*Offshore bulk container* means a bulk container specially designed for repeated use for the transport of dangerous goods to, from and between offshore facilities. An offshore bulk container is designed and constructed in accordance with *Guidelines for the approval of offshore containers handled in open seas* (MSC/Circ.860).

*Open cargo transport unit* means a unit which is not a closed cargo transport unit.

\* United Nations Publication: ECE/TRANS/275 (Sales No. E.18.VIII.1).

*Open cryogenic receptacle* means a transportable thermally insulated receptacle for refrigerated liquefied gases maintained at atmospheric pressure by continuous venting of the refrigerated liquefied gas.

*Open ro-ro cargo space* means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.

*Outer packaging* means the outer protection of a composite or combination packaging together with any absorbent materials, cushioning and any other components necessary to contain and protect inner receptacles or inner packagings.

*Overpack* means an enclosure used by a single consignor to contain one or more packages and to form one unit for the convenience of handling and stowage during transport. Examples of overpacks are a number of packages either:

- .1 placed or stacked on to a load board, such as a pallet, and secured by strapping, shrink-wrapping, stretch-wrapping, or other suitable means; or
- .2 placed in a protective outer packaging such as a box or crate.

*Overstowed* means that a package or container is directly stowed on top of another.

*Package* means the complete product of the packing operation, consisting of the packaging and its contents prepared for transport.

*Packaging* means one or more receptacles and any other components or materials necessary for the receptacles to perform their containment and other safety functions.

*Pressure drums* are welded transportable pressure receptacles of a water capacity exceeding 150 L and of not more than 1,000 L (e.g. cylindrical receptacles equipped with rolling hoops, spheres on skids).

*Pressure receptacles* is a collective term that includes cylinders, tubes, pressure drums, closed cryogenic receptacles, metal hydride storage systems, bundles of cylinders and salvage pressure receptacles.

*Quality assurance* means a systematic programme of controls and inspections applied by any organization or body which is aimed at providing adequate confidence that the standard of safety prescribed in this Code is achieved in practice.

*Radiation detection system* is an apparatus that contains radiation detectors as components.

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*Radioactive contents*, for the transport of radioactive material, mean the radioactive material together with any contaminated or activated solids, liquids, and gases within the packaging.

*Receptacles* means containment vessels for receiving and holding substances or articles, including any means of closing.

*Reconditioned packagings* include:

- .1 metal drums that:
  - .1 are cleaned to original materials of construction, with all former contents, internal and external corrosion, and external coatings and labels removed;
  - .2 are restored to original shape and contour, with chimes (if any) straightened and sealed, and all non-integral gaskets replaced; and
  - .3 are inspected after cleaning, but before painting, with rejection of packagings with visible pitting, significant reduction in material thickness, metal fatigue, damaged threads or closures, or other significant defects;
- .2 plastic drums and jerricans that:
  - .1 are cleaned to original materials of construction, with all former contents, external coatings and labels removed;
  - .2 have all non-integral gaskets replaced; and
  - .3 are inspected after cleaning, with rejection of packagings with visible damage such as tears, creases or cracks, or damaged threads or closures, or other significant defects.

*Recycled plastics material* means material recovered from used industrial packagings that has been cleaned and prepared for processing into new packagings. The specific properties of the recycled material used for production of new packagings shall be assured and documented regularly as part of a quality assurance programme recognized by the competent authority. The quality assurance programme shall include a record of proper pre-sorting and verification that each batch of recycled plastics material has the proper melt flow rate, density, and tensile yield strength, consistent with that of the design type manufactured from such recycled material. This necessarily includes knowledge about the packaging material from which the

recycled plastics have been derived, as well as awareness of the prior contents of those packagings if those prior contents might reduce the capability of new packagings produced using that material. In addition, the packaging manufacturer's quality assurance programme under 6.1.1.3 shall include performance of the mechanical design type test in 6.1.5 on packagings manufactured from each batch of recycled plastics material. In this testing, stacking performance may be verified by appropriate dynamic compression testing rather than static load testing.

**Note:** ISO 16103:2005, *Packaging – Transport packages for dangerous goods – Recycled plastics material*, provides additional guidance on procedures to be followed in approving the use of recycled plastics material.

*Remanufactured IBCs* (see *Intermediate bulk containers (IBCs)*).

*Remanufactured large packaging* means a metal or rigid plastics large packaging that:

- .1 is produced as a UN type from a non-UN type; or
- .2 is converted from one UN design type to another UN design type.

Remanufactured large packagings are subject to the same provisions of this Code that apply to new large packagings of the same type (see also design type definition in 6.6.5.1.2).

*Remanufactured packagings* include:

- .1 metal drums that:
  - .1 are produced as a UN type from a non-UN type;
  - .2 are converted from one UN type to another UN type; or
  - .3 undergo the replacement of integral structural components (such as non-removable heads); or
- .2 plastic drums that:
  - .1 are converted from one UN type to another UN type (such as 1H1 to 1H2); or
  - .2 undergo the replacement of integral structural components.

Remanufactured drums are subject to the same provisions of this Code that apply to a new drum of the same type.

*Repaired IBCs* (see *Intermediate bulk containers (IBCs)*).

*Re-used large packaging* means a large packaging to be refilled which has been examined and found free of defects affecting the ability to withstand the performance tests: the term includes those which are refilled with the same or similar compatible contents and are transported within distribution chains controlled by the consignor of the product.

*Re-used packagings* means packagings to be refilled which have been examined and found free of defects affecting the ability to withstand the performance tests; the term includes those which are refilled with the same or similar compatible contents and are transported within distribution chains controlled by the consignor of the product.

*Road tank vehicle* means a vehicle equipped with a tank with a capacity of more than 450 L, fitted with pressure-relief devices.

*Ro-ro cargo space* means spaces not normally subdivided in any way and extending to either a substantial length or the entire length of the ship in which goods (packaged or in bulk, in or on rail or road cars, vehicles (including road or rail tankers), trailers, containers, pallets, demountable tanks or in or on similar stowage units or other receptacles) can be loaded and unloaded normally in a horizontal direction.

*Ro-ro ship* (roll-on/roll-off ship) means a ship which has one or more decks, either closed or open, not normally subdivided in any way and generally running the entire length of the ship, carrying goods which are normally loaded and unloaded in a horizontal direction.

*Routine maintenance of IBCs* (see *Intermediate bulk containers (IBCs)*).

*Salvage packagings* are special packagings into which damaged, defective, leaking or non-conforming dangerous goods packages, or dangerous goods that have spilled or leaked, are placed for purposes of transport for recovery or disposal.

*Salvage pressure receptacle* means a pressure receptacle with a water capacity not exceeding 3,000 L into which are placed damaged, defective, leaking or non-conforming pressure receptacle(s) for the purpose of transport, e.g. for recovery or disposal.

- △ *Self-accelerating decomposition temperature (SADT)* means the lowest temperature at which self-accelerating decomposition may occur in a substance in the packaging, IBC or portable tank as offered for transport. The SADT shall be determined in accordance with the test procedures given in Part II, Section 28 of the *Manual of Tests and Criteria*.

△ *Self-accelerating polymerization temperature* (SAPT) means the lowest temperature at which self-accelerating polymerization may occur with a substance in the packaging, IBC or portable tank as offered for transport. The SAPT shall be determined in accordance with the test procedures established for the self-accelerating decomposition temperature for self-reactive substances in accordance with part II, Section 28 of the *Manual of Tests and Criteria*.

*Semi-trailer* means any trailer designed to be coupled to a motor vehicle in such a way that part of it rests on the motor vehicle and a substantial part of its mass and of the mass of its load is borne by the motor vehicle.

*Service life*, for composite cylinders and tubes, means the number of years the cylinder or tube is permitted to be in service.

*Settled pressure* means the pressure of the contents of a pressure receptacle in thermal and diffusive equilibrium.

*Shipborne barge* or *barge* means an independent, non-self-propelled vessel, specially designed and equipped to be lifted in a loaded condition and stowed aboard a barge-carrying ship or barge feeder vessel.

*Shipment* means the specific movement of a consignment from origin to destination.

*Shipper*, for the purpose of this Code, has the same meaning as *consignor*.

*Short international voyage* means an international voyage in the course of which a ship is not more than 200 miles from a port or place in which the passengers and crew could be placed in safety. Neither the distance between the last port of call in the country in which the voyage begins and the final port of destination nor the return voyage shall exceed 600 miles. The final port of destination is the last port of call in the scheduled voyage at which the ship commences its return voyage to the country in which the voyage began.

*Sift-proof packagings* are packagings impermeable to dry contents, including fine solid material produced during transport.

*Solid bulk cargo* means any material, other than liquid or gas, consisting of a combination of particles, granules or any larger pieces of material, generally uniform in composition, which is loaded directly into the cargo spaces of a ship without any intermediate form of containment (this includes a material loaded in a barge on a barge-carrying ship).

*Solids* are dangerous goods, other than gases, that do not meet the definition of *liquids* in this chapter.

*Special category space* means an enclosed space, above or below deck, intended for the transport of motor vehicles with fuel in their tanks for their own propulsion, into and from which such vehicles can be driven and to which passengers have access.

*Tank* means a portable tank (including a tank-container), a road tank-vehicle, a rail tank-wagon or a receptacle to contain solids, liquids, or liquefied gases and has a capacity of not less than 450 L when used for the transport of gases as defined in 2.2.1.1.

*Test pressure* means the required pressure applied during a pressure test for qualification or requalification (for portable tanks, see 6.7.2.1).

*Through or into* means through or into the countries in which a consignment is transported but specifically excludes countries “over” which a consignment is carried by air, provided that there are no scheduled stops in those countries.

*Transboundary movement of wastes* means any shipment of wastes from an area under the national jurisdiction of one country to or through an area under the national jurisdiction of another country, or to or through an area not under the national jurisdiction of any country, provided at least two countries are concerned by the movement.

△ *Transport index* (TI) assigned to a package, overpack or freight container, or to unpackaged LSA-I or SCO-I or SCO-III, for the transport of radioactive material, means a number which is used to provide control over radiation exposure.

*Tube* means a transportable pressure receptacle of seamless or composite construction having a water capacity exceeding 150 L and of not more than 3,000 L.

*Unit load* means that a number of packages are either:

- .1 placed or stacked on and secured by strapping, shrink-wrapping, or other suitable means to a load board, such as a pallet;
- .2 placed in a protective outer enclosure, such as a pallet box;
- .3 permanently secured together in a sling.

*Vehicle* means a road vehicle (including an articulated vehicle, i.e. a tractor and semi-trailer combination) or railroad car or railway wagon. Each trailer shall be considered as a separate vehicle.

*Wastes* means substances, solutions, mixtures, or articles containing or contaminated with one or more constituents which are subject to the provisions of this Code and for which no direct use is envisaged but which are transported for dumping, incineration, or other methods of disposal.

*Water-reactive* means a substance which, in contact with water, emits flammable gas.

*Weather deck* means a deck which is completely exposed to the weather from above and from at least two sides.

*Wooden barrels* means packagings made of natural wood, of round cross-section, having convex walls, consisting of staves and heads and fitted with hoops.

*Working pressure* means the settled pressure of a compressed gas at a reference temperature of 15°C in a full pressure receptacle.

### 1.2.1.1 Clarifying examples for certain defined terms

The following explanations and examples are meant to assist in clarifying the use of some of the packaging terms defined in this chapter.

The definitions in this chapter are consistent with the use of the defined terms throughout the Code. However, some of the defined terms are commonly used in other ways. This is particularly evident in respect of the term “inner receptacle” which has often been used to describe the “inners” of a combination packaging.

The “inners” of “combination packagings” are always termed “inner packagings”, not “inner receptacles”. A glass bottle is an example of such an “inner packaging”.

The “inners” of “composite packagings” are normally termed “inner receptacles”. For example, the “inner” of a 6HA1 composite packaging (plastics material) is such an “inner receptacle” since it is normally not designed to perform a containment function without its “outer packaging” and is not, therefore, an “inner packaging”.

## 1.2.2 Units of measurement

### 1.2.2.1 The following units of measurement\* are applicable in this Code:

Measurement of:	SI unit <sup>a</sup>	Acceptable alternative unit	Relationship between units
Length	m (metre)	–	–
Area	m <sup>2</sup> (square metre)	–	–
Volume	m <sup>3</sup> (cubic metre)	L <sup>b</sup> (litre)	1 L = 10 <sup>-3</sup> m <sup>3</sup>
Time	s (second)	min (minute) h (hour) d (day)	1 min = 60 s 1 h = 3,600 s 1 d = 86,400 s
Mass	kg (kilogram)	g (gram) t (ton)	1 g = 10 <sup>-3</sup> kg 1 t = 10 <sup>3</sup> kg
Mass density	kg/m <sup>3</sup>	kg/L	1 kg/L = 10 <sup>3</sup> kg/m <sup>3</sup>
Temperature	K (kelvin)	°C (degree Celsius)	0°C = 273.15 K
Difference of temperature	K (kelvin)	°C (degree Celsius)	1°C = 1 K
Force	N (newton)	–	1 N = 1 kg·m/s <sup>2</sup>
Pressure	Pa (pascal)	bar (bar)	1 bar = 10 <sup>5</sup> Pa 1 Pa = 1 N/m <sup>2</sup>
Stress	N/m <sup>2</sup>	N/mm <sup>2</sup>	1 N/mm <sup>2</sup> = 1 MPa
Work Energy Quantity of heat	J (joule)	kWh (kilowatt hour)	1 kWh = 3.6 MJ 1 J = 1 N·m = 1 W·s
Power		eV (electronvolt)	1 eV = 0.1602 × 10 <sup>-18</sup> J
Power	W (watt)	–	1 W = 1 J/s = 1 N·m/s
Kinematic viscosity	m <sup>2</sup> /s	mm <sup>2</sup> /s	1 mm <sup>2</sup> /s = 10 <sup>-6</sup> m <sup>2</sup> /s
Dynamic viscosity	Pa·s	mPa·s	1 mPa·s = 10 <sup>-3</sup> Pa·s

\* The following round figures are applicable for the conversion of the units hitherto used into SI units.

Measurement of:	SI unit <sup>a</sup>	Acceptable alternative unit	Relationship between units
Activity	Bq (becquerel)	–	–
Dose equivalent	Sv (sievert)	–	–
Conductivity	S/m (siemens/metre)	–	–

<sup>a</sup> The International System of Units (SI) is the result of decisions taken at the General Conference on Weights and Measures (Address: Pavillon de Breteuil, Parc de St-Cloud, F-92312 Sèvres).

<sup>b</sup> The abbreviation “l” for litre may also be used in place of the abbreviation “L”.

<b>Force</b>	<b>Stress</b>		
1 kg = 9.807 N	1 kg/mm <sup>2</sup> = 9.807 N/mm <sup>2</sup>		
1 N = 0.102 kg	1 N/mm <sup>2</sup> = 0.102 kg/mm <sup>2</sup>		
<b>Pressure</b>			
1 Pa = 1 N/m <sup>2</sup> = 10 <sup>-5</sup> bar	= 1.02 × 10 <sup>-5</sup> kg/cm <sup>2</sup>	= 0.75 × 10 <sup>-2</sup> torr	
1 bar = 10 <sup>5</sup> Pa	= 1.02 kg/cm <sup>2</sup>	= 750 torr	
1 kg/cm <sup>2</sup> = 9.807 × 10 <sup>4</sup> Pa	= 0.9807 bar	= 736 torr	
1 torr = 1.33 × 10 <sup>2</sup> Pa	= 1.33 × 10 <sup>-3</sup> bar	= 1.36 × 10 <sup>-3</sup> kg/cm <sup>2</sup>	
<b>Energy, work, quantity of heat</b>			
1 J = 1 N·m	= 0.278 × 10 <sup>-6</sup> kWh	= 0.102 kg·m	= 0.239 × 10 <sup>-3</sup> kcal
1 kWh = 3.6 × 10 <sup>6</sup> J	= 367 × 10 <sup>3</sup> kg·m	= 860 kcal	
1 kg·m = 9.807 J	= 2.72 × 10 <sup>-6</sup> kWh	= 2.34 × 10 <sup>-3</sup> kcal	
1 kcal = 4.19 × 10 <sup>3</sup> J	= 1.16 × 10 <sup>-3</sup> kWh	= 427 kg·m	
<b>Power</b>		<b>Kinematic viscosity</b>	
1 W = 0.102 kg·m/s	= 0.86 kcal/h	1 m <sup>2</sup> /s = 10 <sup>4</sup> St (stokes)	
1 kg·m/s = 9.807 W	= 8.43 kcal/h	1 St = 10 <sup>-4</sup> m <sup>2</sup> /s	
1 kcal/h = 1.16 W	= 0.119 kg·m/s		
<b>Dynamic viscosity</b>			
1 Pa·s = 1 N·s/m <sup>2</sup>	= 10 P (poise)	= 0.102 kg·s/m <sup>2</sup>	
1 P = 0.1 Pa·s	= 0.1 N·s/m <sup>2</sup>	= 1.02 × 10 <sup>-2</sup> kg·s/m <sup>2</sup>	
1 kg·s/m <sup>2</sup> = 9.807 Pa·s	= 9.807 N·s/m <sup>2</sup>	= 98.07 P	

The decimal multiples and sub-multiples of a unit may be formed by prefixes or symbols, having the following meanings, placed before the name or symbol of the unit:

Multiplying factor		Prefix	Symbol
1 000 000 000 000 000 000 = 10 <sup>18</sup>	quintillion	exa	E
1 000 000 000 000 000 = 10 <sup>15</sup>	quadrillion	peta	P
1 000 000 000 000 = 10 <sup>12</sup>	trillion	tera	T
1 000 000 000 = 10 <sup>9</sup>	billion	giga	G
1 000 000 = 10 <sup>6</sup>	million	mega	M
1 000 = 10 <sup>3</sup>	thousand	kilo	k
100 = 10 <sup>2</sup>	hundred	hecto	h
10 = 10 <sup>1</sup>	ten	deca	da
0.1 = 10 <sup>-1</sup>	tenth	deci	d
0.01 = 10 <sup>-2</sup>	hundredth	centi	c
0.001 = 10 <sup>-3</sup>	thousandth	milli	m
0.000 001 = 10 <sup>-6</sup>	millionth	micro	μ
0.000 000 001 = 10 <sup>-9</sup>	billionth	nano	n
0.000 000 000 001 = 10 <sup>-12</sup>	trillionth	pico	p
0.000 000 000 000 001 = 10 <sup>-15</sup>	quadrillionth	femto	f
0.000 000 000 000 000 001 = 10 <sup>-18</sup>	quintillionth	atto	a

**Note:** 10<sup>9</sup> = 1 billion is United Nations usage in English. By analogy, so is 10<sup>-9</sup> = 1 billionth.

1.2.2.2 [Reserved]

1.2.2.3 Whenever the mass of a package is mentioned, the gross mass is meant unless otherwise stated. The mass of containers or tanks used for the transport of goods is not included in the gross mass.

- 1.2.2.4 Unless expressly stated otherwise, the sign “%” represents:
- .1 in the case of mixtures of solids or of liquids, and also in the case of solutions and of solids wetted by a liquid: a percentage mass based on the total mass of the mixture, the solution or the wetted solid;
  - .2 in the case of mixtures of compressed gases: when filled by pressure, the proportion of the volume indicated as a percentage of the total volume of the gaseous mixture, or, when filled by mass, the proportion of the mass indicated as a percentage of the total mass of the mixture;
  - .3 in the case of mixtures of liquefied gases and gases dissolved under pressure: the proportion of the mass indicated as a percentage of the total mass of the mixture.
- 1.2.2.5 Pressures of all kinds relating to receptacles (such as test pressure, internal pressure, safety-valve opening pressure) are always indicated in gauge pressure (pressure in excess of atmospheric pressure); however, the vapour pressure of substances is always expressed in absolute pressure.

### 1.2.2.6 Tables of equivalence

#### 1.2.2.6.1 Mass conversion tables

##### 1.2.2.6.1.1 Conversion factors

<i>Multiply</i>	<i>by</i>	<i>to obtain</i>
Grams	0.03527	Ounces
Grams	0.002205	Pounds
Kilograms	35.2736	Ounces
Kilograms	2.2046	Pounds
Ounces	28.3495	Grams
Pounds	16	Ounces
Pounds	453.59	Grams
Pounds	0.45359	Kilograms
Hundredweight	112	Pounds
Hundredweight	50.802	Kilograms

##### 1.2.2.6.1.2 Pounds to kilograms and vice versa

When the central value in any row of these mass conversion tables is taken to be in pounds, its equivalent value in kilograms is shown on the left; when the central value is in kilograms, its equivalent in pounds is shown on the right.

kg	←	→	lb	kg	←	→	lb	kg	←	→	lb
0.227		0.5	1.10	22.7		50	110	90.7		200	441
0.454		1	2.20	24.9		55	121	95.3		210	463
0.907		2	4.41	27.2		60	132	99.8		220	485
1.36		3	6.61	29.5		65	143	102		225	496
1.81		4	8.82	31.8		70	154	104		230	507
2.27		5	11.0	34.0		75	165	109		240	529
2.72		6	13.2	36.3		80	176	113		250	551
3.18		7	15.4	38.6		85	187	118		260	573
3.63		8	17.6	40.8		90	198	122		270	595
4.08		9	19.8	43.1		95	209	125		275	606
4.54		10	22.0	45.4		100	220	127		280	617
4.99		11	24.3	47.6		105	231	132		290	639
5.44		12	26.5	49.9		110	243	136		300	661
5.90		13	28.7	52.2		115	254	159		350	772
6.35		14	30.9	54.4		120	265	181		400	882
6.80		15	33.1	56.7		125	276	204		450	992
7.26		16	35.3	59.0		130	287	227		500	1,102
7.71		17	37.5	61.2		135	298	247		545	1,202
8.16		18	39.7	63.5		140	309	249		550	1,213
8.62		19	41.9	65.8		145	320	272		600	1,323
9.07		20	44.1	68.0		150	331	318		700	1,543
11.3		25	55.1	72.6		160	353	363		800	1,764
13.6		30	66.1	77.1		170	375	408		900	1,984
15.9		35	77.2	79.4		175	386	454		1,000	2,205
18.1		40	88.2	81.6		180	397				
20.4		45	99.2	86.2		190	419				

1.2.2.6.2 *Liquid measure conversion tables*

1.2.2.6.2.1 *Conversion factors*

<i>Multiply</i>	<i>by</i>	<i>to obtain</i>
Litres	0.2199	Imperial gallons
Litres	1.759	Imperial pints
Litres	0.2643	US gallons
Litres	2.113	US pints
Gallons	8	Pints
Imperial gallons	4.546	Litres
Imperial gallons } Imperial pints }	1.20095	{ US gallons { US pints
Imperial pints	0.568	Litres
US gallons	3.7853	Litres
US gallons } US pints }	0.83268	{ Imperial gallons { Imperial pints
US pints	0.473	Litres

1.2.2.6.2.2 *Imperial pints to litres and vice versa*

When the central value in any row of these liquid measure conversion tables is taken to be in pints, its equivalent value in litres is shown on the left; when the central value is in litres, its equivalent in pints is shown on the right.

L	← pt	→ L	pt
0.28	0.5		0.88
0.57	1		1.76
0.85	1.5		2.64
1.14	2		3.52
1.42	2.5		4.40
1.70	3		5.28
1.99	3.5		6.16
2.27	4		7.04
2.56	4.5		7.92
2.84	5		8.80
3.12	5.5		9.68
3.41	6		10.56
3.69	6.5		11.44
3.98	7		12.32
4.26	7.5		13.20
4.55	8		14.08

## 1.2.2.6.2.3 Imperial gallons to litres and vice versa

When the central value in any row of these liquid measure conversion tables is taken to be in gallons, its equivalent value in litres is shown on the left; when the central value is in litres, its equivalent in gallons is shown on the right.

L	← gal →	L	gal	L	← gal →	L	gal
2.27	0.5	0.11	159.11	35	7.70		
4.55	1	0.22	163.65	36	7.92		
9.09	2	0.44	168.20	37	8.14		
13.64	3	0.66	172.75	38	8.36		
18.18	4	0.88	177.29	39	8.58		
22.73	5	1.10	181.84	40	8.80		
27.28	6	1.32	186.38	41	9.02		
31.82	7	1.54	190.93	42	9.24		
36.37	8	1.76	195.48	43	9.46		
40.91	9	1.98	200.02	44	9.68		
45.46	10	2.20	204.57	45	9.90		
50.01	11	2.42	209.11	46	10.12		
54.55	12	2.64	213.66	47	10.34		
59.10	13	2.86	218.21	48	10.56		
63.64	14	3.08	222.75	49	10.78		
68.19	15	3.30	227.30	50	11.00		
72.74	16	3.52	250.03	55	12.09		
77.28	17	3.74	272.76	60	13.20		
81.83	18	3.96	295.49	65	14.29		
86.37	19	4.18	318.22	70	15.40		
90.92	20	4.40	340.95	75	16.49		
95.47	21	4.62	363.68	80	17.60		
100.01	22	4.84	386.41	85	18.69		
104.56	23	5.06	409.14	90	19.80		
109.10	24	5.28	431.87	95	20.89		
113.65	25	5.50	454.60	100	22.00		
118.19	26	5.72	613.71	135	29.69		
122.74	27	5.94	681.90	150	32.98		
127.29	28	6.16	909.20	200	43.99		
131.83	29	6.38	1,022.85	225	49.48		
136.38	30	6.60	1,136.50	250	54.97		
140.92	31	6.82	1,363.80	300	65.99		
145.47	32	7.04	1,591.10	350	76.96		
150.02	33	7.26	1,818.40	400	87.99		
154.56	34	7.48	2,045.70	450	98.95		

1.2.2.6.3 Temperature conversion tables

Degrees Fahrenheit to degrees Celsius and vice versa

When the central value in any row of these temperature conversion tables is taken to be in °F, its equivalent value in °C is shown on the left; when the central value is in °C, its equivalent in °F is shown on the right.

General formula:  $^{\circ}\text{F} = (^{\circ}\text{C} \times \frac{9}{5}) + 32$ ;  $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times \frac{5}{9}$

°C	←	→	°F	°C	←	→	°F	°C	←	→	°F
	°F	°C			°F	°C			°F	°C	
-73.3	-100	-148		-21.1	-6	21.2		1.1	34	93.2	
-67.8	-90	-130		-20.6	-5	23.0		1.7	35	95	
-62.2	-80	-112		-20.0	-4	24.8		2.2	36	96.8	
-56.7	-70	-94		-19.4	-3	26.6		2.8	37	98.6	
-51.1	-60	-76		-18.9	-2	28.4		3.3	38	100.4	
-45.6	-50	-58		-18.3	-1	30.2		3.9	39	102.2	
-40	-40	-40		-17.8	0	32.0		4.4	40	104	
-39.4	-39	-38.2		-17.2	1	33.8		5	41	105.8	
-38.9	-38	-36.4		-16.7	2	35.6		5.6	42	107.6	
-38.3	-37	-34.6		-16.1	3	37.4		6.1	43	109.4	
-37.8	-36	-32.8		-15.6	4	39.2		6.7	44	111.2	
-37.2	-35	-31		-15.0	5	41.0		7.2	45	113	
-36.7	-34	-29.2		-14.4	6	42.8		7.8	46	114.8	
-36.1	-33	-27.4		-13.9	7	44.6		8.3	47	116.6	
-35.6	-32	-25.6		-13.3	8	46.4		8.9	48	118.4	
-35	-31	-23.8		-12.8	9	48.2		9.4	49	120.2	
-34.4	-30	-22		-12.2	10	50.0		10.0	50	122.0	
-33.9	-29	-20.2		-11.7	11	51.8		10.6	51	123.8	
-33.3	-28	-18.4		-11.1	12	53.6		11.1	52	125.6	
-32.8	-27	-16.6		-10.6	13	55.4		11.7	53	127.4	
-32.2	-26	-14.8		-10.0	14	57.2		12.2	54	129.2	
-31.7	-25	-13		-9.4	15	59.0		12.8	55	131.0	
-31.1	-24	-11.2		-8.9	16	60.8		13.3	56	132.8	
-30.6	-23	-9.4		-8.3	17	62.6		13.9	57	134.6	
-30	-22	-7.6		-7.8	18	64.4		14.4	58	136.4	
-29.4	-21	-5.8		-7.2	19	66.2		15.0	59	138.2	
-28.9	-20	-4		-6.7	20	68		15.6	60	140.0	
-28.3	-19	-2.2		-6.1	21	69.8		16.1	61	141.8	
-27.8	-18	-0.4		-5.6	22	71.6		16.7	62	143.6	
-27.2	-17	1.4		-5	23	73.4		17.2	63	145.4	
-26.7	-16	3.2		-4.4	24	75.2		17.8	64	147.2	
-26.1	-15	5		-3.9	25	77		18.3	65	149.0	
-25.6	-14	6.8		-3.3	26	78.8		18.9	66	150.8	
-25.0	-13	8.6		-2.8	27	80.6		19.4	67	152.6	
-24.4	-12	10.4		-2.2	28	82.4		20.0	68	154.4	
-23.9	-11	12.2		-1.7	29	84.2		20.6	69	156.2	
-23.3	-10	14.0		-1.1	30	86		21.1	70	158.0	
-22.8	-9	15.8		-0.6	31	87.8		21.7	71	159.8	
-22.2	-8	17.6		0	32	89.6		22.2	72	161.6	
-21.7	-7	19.4		0.6	33	91.4		22.8	73	163.4	

°C	← °F →	°C	°F	°C	← °F →	°C	°F	°C	← °F →	°C	°F
23.3	74	165.2		37.8	100	212		52.2	126	258.8	
23.9	75	167.0		38.3	101	213.8		52.8	127	260.6	
24.4	76	168.8		38.9	102	215.6		53.3	128	262.4	
25.0	77	170.6		39.4	103	217.4		53.9	129	264.2	
25.6	78	172.4		40	104	219.2		54.4	130	266.0	
26.1	79	174.2		40.6	105	221		55.0	131	267.8	
26.7	80	176.0		41.1	106	222.8		55.6	132	269.6	
27.2	81	177.8		41.7	107	224.6		56.1	133	271.4	
27.8	82	179.6		42.2	108	226.4		56.7	134	273.2	
28.3	83	181.4		42.8	109	228.2		57.2	135	275.0	
28.9	84	183.2		43.3	110	230		57.8	136	276.8	
29.4	85	185		43.9	111	231.8		58.3	137	278.6	
30	86	186.8		44.4	112	233.6		58.9	138	280.4	
30.6	87	188.6		45	113	235.4		59.4	139	282.2	
31.1	88	190.4		45.6	114	237.2		60.0	140	284.0	
31.7	89	192.2		46.1	115	239.0		65.6	150	302.0	
32.2	90	194		46.7	116	240.8		71.1	160	320.0	
32.8	91	195.8		47.2	117	242.6		76.7	170	338.0	
33.3	92	197.6		47.8	118	244.4		82.2	180	356.0	
33.9	93	199.4		48.3	119	246.2		87.8	190	374.0	
34.4	94	201.2		48.9	120	248.0		93.3	200	392.0	
35	95	203		49.4	121	249.8		98.9	210	410.0	
35.6	96	204.8		50.0	122	251.6		104.4	220	428.0	
36.1	97	206.6		50.6	123	253.4		110.0	230	446.0	
36.7	98	208.4		51.1	124	255.2		115.6	240	464.0	
37.2	99	210.2		51.7	125	257.0		121.1	250	482.0	

### 1.2.3 List of abbreviations

ASTM	American Society for Testing and Materials (ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA, 19428-2959, United States of America)
CGA	Compressed Gas Association (CGA, 14501 George Carter Way, Suite 103, Chantilly, VA 20151, United States of America)
CCC	IMO Sub-Committee on Carriage of Cargoes and Containers
CSC	<i>International Convention for Safe Containers, 1972</i> (CSC Convention), as amended
⊗	
ECOSOC	Economic and Social Council (UN)
EmS	The EmS Guide: Revised Emergency Response Procedures for Ships Carrying Dangerous Goods
EN (standard)	European standard published by the European Committee for Standardization (CEN) (CEN, 36 rue de Stassart, B-1050 Brussels, Belgium)
FAO	Food and Agriculture Organization (FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy)
HNS Convention	<i>International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea</i> (IMO)
IAEA	International Atomic Energy Agency (IAEA, P.O. Box 100, A – 1400 Vienna, Austria)
ICAO	International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)
IEC	International Electrotechnical Commission (IEC, 3 rue de Varembe, P.O. Box 131, CH-1211 Geneva 20, Switzerland)

ILO	International Labour Organization/Office (ILO, 4 route des Morillons, CH-1211 Geneva 22, Switzerland)
IMGS	<i>International Medical Guide for Ships</i>
IMO	International Maritime Organization (IMO, 4 Albert Embankment, London SE1 7SR, United Kingdom)
IMDG Code	<i>International Maritime Dangerous Goods Code</i>
IMSBC Code	<i>International Maritime Solid Bulk Cargoes Code</i>
INF Code	<i>International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on board Ships</i>
ISO (standard)	An international standard published by the International Organization for Standardization (ISO, 1, ch. de la Voie-Creuse, CH-1211 Geneva 20, Switzerland)
MARPOL	<i>International Convention for the Prevention of Pollution from Ships, 1973</i> , as amended by the 1978 and 1997 Protocols relating thereto
MAWP	Maximum allowable working pressure
MEPC	Marine Environment Protection Committee (IMO)
MFAG	Medical First Aid Guide for use in Accidents Involving Dangerous Goods
MSC	Maritime Safety Committee (IMO)
N.O.S.	not otherwise specified
SADT	self-accelerating decomposition temperature
SAPT	self-accelerating polymerization temperature
SOLAS	<i>International Convention for the Safety of Life at Sea, 1974</i> , as amended
UNECE	United Nations Economic Commission for Europe (UNECE, Palais des Nations, 8–14 avenue de la Paix, CH-1211 Geneva 10, Switzerland)
UN number	four-digit United Nations number is assigned to dangerous, hazardous and harmful substances, materials and articles most commonly transported
UNEP	United Nations Environment Programme (United Nations Avenue, Gigiri, PO Box 30552, 00100, Nairobi, Kenya)
UNESCO/IOC	UN Educational, Scientific and Cultural Organization/Intergovernmental Oceanographic Commission (UNESCO/IOC, 1 rue Miollis, 75732 Paris Cedex 15, France)
WHO	World Health Organization (Avenue Appia 20, CH-1211 Geneva 27, Switzerland)
WMO	World Meteorological Organization (WMO, 7bis, avenue de la Paix, Case postale No. 2300, CH-1211 Geneva 2, Switzerland)