Chapter 7.1

General stowage provisions

7.1.1 Introduction

This chapter contains the general provisions for the stowage of dangerous goods in all types of ships. Specific provisions applicable to, container ships, ro-ro ships, general cargo ships and barge carrying ships, are stipulated in chapters 7.4 to 7.7.

7.1.2 Definitions

Note 1: The term "magazine" is no longer used in the context of the IMDG Code. A magazine that is not a fixed part of the ship shall meet the provisions for a closed cargo transport unit for class 1 (see 7.1.2). A magazine that is a fixed part of the ship such as compartment, below deck area or hold shall meet the provisions of 7.6.2.4.

Note 2: Cargo holds cannot be interpreted as closed cargo transport units.

Clear of living quarters means that packages or cargo transport units shall be stowed a minimum distance of 3 m from accommodation, air intakes, machinery spaces and other enclosed work areas.

Closed cargo transport unit for class 1 means a unit which fully encloses the contents by permanent structures, can be secured to the ship's structure and is, except for division 1.4, structurally serviceable as defined in this section. Cargo transport units with fabric sides or tops are not closed cargo transport units. The floor of any closed cargo transport unit shall either be constructed of wood, close-boarded, or so arranged that goods are stowed on sparred gratings, wooden pallets or dunnage.

Combustible material means material which may or may not be dangerous goods but which is easily ignited and supports combustion. Examples of combustible materials include wood, paper, straw, vegetable fibres, products made from such materials, coal, lubricants, and oils. This definition does not apply to packaging material or dunnage.

Potential sources of ignition means, but is not limited to, open fires, machinery exhausts, galley uptakes, electrical outlets and electrical equipment including those on refrigerated or heated cargo transport units unless they are of certified safe type.*

Protected from sources of heat means that packages and cargo transport units shall be stowed at least 2.4 m from heated ship structures, where the surface temperature is liable to exceed 55°C. Examples of heated structures are steam pipes, heating coils, top or side walls of heated fuel and cargo tanks, and bulkheads of machinery spaces. In addition, packages not loaded inside a cargo transport unit and stowed on deck shall be shaded from direct sunlight. The surface of a cargo transport unit can heat rapidly when in direct sunlight in nearly windless conditions and the cargo may also become heated. Depending on the nature of the goods in the cargo transport unit and the planned voyage precautions shall be taken to ensure that exposure to direct sunlight is reduced.

Stowage means the proper placement of dangerous goods on board a ship in order to ensure safety and environmental protection during transport.

Stowage on deck means stowage on the weather deck. For open ro-ro cargo spaces see 7.5.2.6.

Stowage under deck means any stowage that is not on the weather deck. For hatchless containerships see 7.4.2.1.

Structurally serviceable for class 1 means the cargo transport unit shall not have major defects in its structural components, e.g. top and bottom rails, top and bottom end rails, door sill and header, floor cross-members, corner posts, and corner fittings in a freight container. Major defects are: dents or bends in the structural

* For cargo spaces, refer to SOLAS II-2/19.3.2 and for refrigerated or heated cargo transport units refer to Recommendations published by the International Electrotechnical Commission, in particular IEC 60079.

members greater than 19 mm in depth, regardless of length; cracks or breaks in structural members; more than one splice (e.g. a lapped splice) in top or bottom end rails or door headers; more than two splices in any one top or bottom side rail or any splice in a door sill or corner post; door hinges and hardware that are seized, twisted, broken, missing or otherwise inoperative; gaskets and seals that do not seal; or, for freight containers, any distortion of the overall configuration great enough to prevent proper alignment of handling equipment, mounting and securing on chassis or vehicle, or insertion into ship's cells. In addition, deterioration in any component of the cargo transport unit, regardless of the material of construction, such as rusted-out metal in sidewalls or disintegrated fibreglass, is unacceptable. Normal wear, however, including oxidation (rust), slight dents and scratches and other damage that does not affect serviceability or the weathertight integrity of the units, is acceptable.

7.1.3 Stowage categories

7.1.3.1 Stowage categories for class 1

Dangerous goods of class 1 other than division 1.4, compatibility group S, packed in limited quantities shall be stowed as indicated in column 16a of the Dangerous Goods List in accordance with one of the categories specified below.

Stowage category 01	Cargo ships (up to 12 passengers)	On deck in closed cargo transport unit or under deck
	Passenger ships	On deck in closed cargo transport unit or under deck
Stowage category 02	Cargo ships (up to 12 passengers)	On deck in closed cargo transport unit or under deck
	Passenger ships	On deck in closed cargo transport unit or under deck in closed cargo transport unit in accordance with 7.1.4.4.6
Stowage category 03	Cargo ships (up to 12 passengers)	On deck in closed cargo transport unit or under deck
	Passenger ships	Prohibited except if in accordance with 7.1.4.4.6
Stowage category 04	Cargo ships (up to 12 passengers)	On deck in closed cargo transport unit or under deck in closed cargo transport unit
	Passenger ships	Prohibited except if in accordance with 7.1.4.4.6
Stowage category 05	Cargo ships (up to 12 passengers)	On deck only in closed cargo transport unit
	Passenger ships	Prohibited except if in accordance with 7.1.4.4.6

7.1.3.2 Stowage categories for classes 2 to 9

Dangerous goods of classes 2 to 9 and division 1.4, compatibility group S, packed in limited quantities shall be stowed as indicated in column 16a of the Dangerous Goods List in accordance with one of the categories specified below:

Stowage category A

Cargo ships or passenger ships carrying a number of passengers limited to not more than 25 or to 1 passenger per 3 m of overall length, whichever is the greater number	ON DECK OR UNDER DECK
Other passenger ships in which the limiting number of passengers transported is exceeded	ON DECK OR UNDER DECK

Stowage category B

Cargo ships or passenger ships carrying a number of passengers limited to not more than 25 or to 1 passenger per 3 m of overall length, whichever is the greater number	ON DECK OR UNDER DECK
Other passenger ships in which the limiting number of passengers transported is exceeded	ON DECK ONLY

Stowage category C	
Cargo ships or passenger ships carrying a number of passengers limited to not more than 25 or to 1 passenger per 3 m of overall length, whichever is the greater number	ON DECK ONLY
Other passenger ships in which the limiting number of passengers transported is exceeded	ON DECK ONLY
Stowage category D	
Cargo ships or passenger ships carrying a number of passengers limited to not more than 25 or to 1 passenger per 3 m of overall length, whichever is the greater number	ON DECK ONLY
Other passenger ships in which the limiting number of passengers transported is exceeded	**PROHIBITED**
Stowage category E	
Cargo ships or passenger ships carrying a number of passengers limited to not more than 25 or to 1 passenger per 3 m of overall length, whichever is the greater number	ON DECK OR UNDER DECK
Other passenger ships in which the limiting number of passengers transported is exceeded	**PROHIBITED**

7.1.4 Special stowage provisions

7.1.4.1 Stowage of empty uncleaned packagings, including IBCs and large packagings

Notwithstanding the stowage provisions given in the Dangerous Goods List, empty uncleaned packagings, including IBCs and large packagings, which shall be stowed o*n deck only* when full may be stowed *on deck or under deck* in a mechanically ventilated cargo space. However, empty uncleaned pressure receptacles which carry a label of class 2.3 shall be stowed *on deck only* (see also 4.1.1.11) and waste aerosols shall only be stowed according to column 16a of the Dangerous Goods List.

△ 7.1.4.2 Stowage of marine pollutants and infectious substances of UN 2814, UN 2900 and UN 3549

Where stowage is permitted *on deck or under deck*, *under deck* stowage is preferred. Where stowage *on deck only* is required, preference shall be given to stowage on well-protected decks or to stowage inboard in sheltered areas of exposed decks.

7.1.4.3 Stowage of limited quantities and excepted quantities

For the stowage of limited quantities and excepted quantities see chapters 3.4 and 3.5.

7.1.4.4 Stowage of goods of class 1

7.1.4.4.1 In cargo ships of 500 gross tons or over and passenger ships constructed before 1 September 1984 and in cargo ships of less than 500 gross tons constructed before 1 February 1992, goods of class 1 with the exception of division 1.4, compatibility group S, shall be stowed *on deck only*, unless otherwise approved by the Administration.

△ **7.1.4.4.2** Goods of class 1 with the exception of division 1.4 shall be stowed not less than a horizontal distance of 12 m from living quarters, life-saving appliances* and areas where the ship's passengers can access without any authorization or limitation.

7.1.4.4.3 Goods of class 1 with the exception of division 1.4 shall not be positioned closer to the ship's side than a distance equal to one eighth of the beam or 2.4 m, whichever is the lesser.

7.1.4.4.4 Goods of class 1 shall not be stowed within a horizontal distance of 6 m from potential sources of ignition.

7.1.4.4.5 ***Transport to or from offshore oil platforms, mobile offshore drilling units and other offshore installations***

Notwithstanding the stowage category indicated in column 16a of the Dangerous Goods List, UN 0124 JET PERFORATING GUNS, CHARGED, and UN 0494 JET PERFORATING GUNS, CHARGED, transported to or from offshore oil platforms, mobile offshore drilling units and other offshore installations may be stowed on deck in offshore well tool pallets, cradles or baskets provided that:

.1 initiation devices shall be segregated from each other and from any jet perforating guns in accordance with the provisions of 7.2.7, and from any other dangerous goods in accordance with the provisions of 7.2.4 and 7.6.3.2, unless otherwise approved by the competent authority;

* Refer to the Unified Interpretation on 7.1.4.4.2 of the IMDG Code on the issue of "life-saving appliances" (MSC.1/Circ.1626).

.2 jet perforating guns shall be securely held in place during transport;

.3 each shaped charge affixed to any gun shall not contain more than 112 g of explosives;

.4 each shaped charge, if not completely enclosed in glass or metal, shall be fully protected by a metal cover following installation in the gun;

.5 both ends of jet perforating guns shall be protected by means of steel end caps allowing for pressure release in the event of fire;

.6 the total explosive content shall not exceed 95 kg per well tool pallet, cradle or basket; and

.7 where more than one well tool pallet, cradle or basket is stowed "on deck", a minimum horizontal distance of 3 m shall be observed between them.

7.1.4.4.6 ***Stowage on passenger ships***

7.1.4.4.6.1 Goods in division 1.4, compatibility group S, may be transported in any amount on passenger ships. No other goods of class 1 may be transported on passenger ships except:

.1 goods in compatibility groups C, D and E and articles in compatibility group G, if the total net explosive mass does not exceed 10 kg per ship and if they are transported in closed cargo transport units *on deck or under deck*;

.2 articles in compatibility group B, if the total net explosive mass does not exceed 10 kg per ship and if they are transported *on deck only* in closed cargo transport units.

7.1.4.4.7 Alternative arrangements to those prescribed in chapter 7.1 for class 1 may be approved by the Administration.

7.1.4.5 Stowage of goods of class 7

△ **7.1.4.5.1** The total activity in a single cargo space of a sea going vessel for transport of LSA material or SCO in Type IP 1, Type IP 2, Type IP 3 packaging or unpackaged shall not exceed the limits shown in the table hereunder. For SCO-III, the limits in the table hereunder may be exceeded provided that the transport plan contains precautions which are to be employed during transport to obtain an overall level of safety at least equivalent to that which would be provided if the limits had been applied.

Conveyance activity limits for LSA material and SCO in industrial packages or unpackaged

Nature of material	Activity limit for a seagoing vessel
LSA I	No limit
LSA II and LSA III non-combustible solids	No limit
LSA II and LSA III combustible solids, and all liquids and gases	$100A_2$
SCO	$100A_2$

7.1.4.5.2 Provided that its average surface heat flux does not exceed 15 W/m^2 and that the immediately surrounding cargo is not in sacks or bags, a package or overpack may be transported or stored among packaged general cargo without any special stowage provisions except as may be specifically required by the competent authority in an applicable certificate of approval.

7.1.4.5.3 Loading of freight containers and accumulation of packages, overpacks and freight containers shall be controlled as follows:

.1 Except under the condition of exclusive use, the total number of packages, overpacks and freight containers aboard a single conveyance shall be so limited that the total sum of the transport indexes aboard the conveyance does not exceed the values shown in the table hereunder. For consignments of LSA I material there shall be no limit on the sum of the transport indexes.

TI limits for freight containers and conveyances not under exclusive use

Type of freight container or conveyance	Limit on total sum of transport indexes in a freight container or aboard a conveyance
Freight container	
Small freight container	50
Large freight container	50
Vehicle	50
Inland water-way vessel (barge)	50
Seagoing vessel[a]	
1 *Hold, compartment or defined deck area*	
Packages, overpacks, small freight containers	50
Large freight containers (closed containers)	200
2 *Total vessel*	
Packages, overpacks, small freight containers	200
Large freight containers (closed containers)	No limit

[a] Packages or overpacks transported in or on a vehicle which are in accordance with the provisions of 7.1.4.5.5 may be transported by vessels provided that they are not removed from the vehicle at any time while on board the ship.

.2 Where a consignment is transported under exclusive use, there shall be no limit on the sum of the transport indexes aboard a single conveyance.

△ **.3** The dose rate under routine conditions of transport shall not exceed 2 mSv/h at any point on the external surface of the vehicle or freight container, and 0.1 mSv/h at 2 m from the external surface of the vehicle or freight container, except for consignments transported under exclusive use by road or rail for which the dose rate limits around the vehicle are set forth in 7.1.4.5.5.2 and 7.1.4.5.5.3.

.4 The total sum of the criticality safety indexes in a freight container and aboard a conveyance shall not exceed the values shown in the table hereunder.

CSI limits for freight containers and conveyances containing fissile material

Type of freight container or conveyance	Limit on total sum of criticality safety indexes in a freight container or aboard a conveyance	
	Not under exclusive use	Under exclusive use
Freight container		
Small freight container	50	n.a.
Large freight container	50	100
Vehicle	50	100
Inland water-way vessel (barge)	50	100
Seagoing vessel[a]		
1 *Hold, compartment or defined deck area*		
Packages, overpacks, small freight containers	50	100
Large freight containers (closed containers)	50	100
2 *Total vessel*		
Packages, overpacks, small freight containers	200[b]	200[c]
Large freight containers (closed containers)	No limit[b]	No limit[c]

[a] Packages or overpacks transported in or on a vehicle which are in accordance with the provisions of 7.1.4.5.5 may be transported by ships provided that they are not removed from the vehicle at any time while on board the ship. In that case, the entries under the heading "under exclusive use" apply.

[b] The consignment shall be so handled and stowed that the total sum of CSIs in any group does not exceed 50, and that each group is handled and stowed so as to maintain a spacing of at least 6 m from other groups.

[c] The consignment shall be so handled and stowed that the total sum of CSIs in any group does not exceed 100, and that each group is handled and stowed so as to maintain a spacing of at least 6 m from other groups. The intervening space between groups may be occupied by other cargo.

7.1.4.5.4 Any package or overpack having either a transport index greater than 10, or any consignment having a criticality safety index greater than 50, shall be transported only under exclusive use.

7.1.4.5.5 For consignments under exclusive use, the dose rate shall not exceed:

.1 10 mSv/h at any point on the external surface of any package or overpack, and may only exceed 2 mSv/h provided that:

.1 the vehicle is equipped with an enclosure which, during routine conditions of transport, prevents the access of unauthorized persons to the interior of the enclosure, and

.2 provisions are made to secure the package or overpack so that its position within the vehicle enclosure remains fixed during routine conditions of transport, and

.3 there is no loading or unloading during the shipment;

.2 2 mSv/h at any point on the outer surfaces of the vehicle, including the upper and lower surfaces, or, in the case of an open vehicle, at any point on the vertical planes projected from the outer edges of the vehicle, on the upper surface of the load, and on the lower external surface of the vehicle; and

.3 0.1 mSv/h at any point 2 m from the vertical planes represented by the outer lateral surfaces of the vehicle, or, if the load is transported in an open vehicle, at any point 2 m from the vertical planes projected from the outer edges of the vehicle.

7.1.4.5.6 In the case of road vehicles, no persons other than the driver and assistants shall be permitted in vehicles carrying packages, overpacks or freight containers bearing category II-YELLOW or III-YELLOW labels.

7.1.4.5.7 Packages or overpacks having a surface dose rate greater than 2 mSv/h, unless being transported in or on a vehicle under exclusive use in accordance with the table under 7.1.4.5.3, footnote (a), shall not be transported by ship except under special arrangement.

7.1.4.5.8 The transport of consignments by means of a special use ship which, by virtue of its design or by reason of its being chartered, is dedicated to the purpose of carrying radioactive material shall be excepted from the provisions specified in 7.1.4.5.3 provided that the following conditions are met:

.1 a radiation protection programme for the shipment shall be approved by the Administration and, when requested, by the competent authority at each port of call;

.2 stowage arrangements shall be predetermined for the whole voyage, including any consignments to be loaded at ports of call en route; and

.3 the loading, transport and unloading of the consignments shall be supervised by persons qualified in the transport of radioactive material.

7.1.4.5.9 Any conveyance and equipment used regularly for the transport of radioactive material shall be periodically checked to determine the level of contamination. The frequency of such checks shall be related to the likelihood of contamination and the extent to which radioactive material is transported.

7.1.4.5.10 Except as provided in 7.1.4.5.11, any conveyance, or equipment or part thereof, which has become contaminated above the limits specified in 4.1.9.1.2 in the course of the transport of radioactive material, or which shows a dose rate in excess of 5 μSv/h at the surface, shall be decontaminated as soon as possible by a qualified person and shall not be re-used unless the following conditions are fulfilled:

.1 the non-fixed contamination shall not exceed the limits specified in 4.1.9.1.2;

.2 the dose rate resulting from the fixed contamination shall not exceed 5 μSv/h at the surface.

△ **7.1.4.5.11** A freight container or conveyance dedicated to the transport of unpackaged radioactive material under exclusive use shall be excepted from the provisions of 4.1.9.1.4 and 7.1.4.5.10 solely with regard to its internal surfaces and only for as long as it remains under that specific exclusive use.

7.1.4.5.12 Where a consignment is undeliverable, the consignment shall be placed in a safe location and the appropriate competent authority shall be informed as soon as possible and a request made for instructions on further action.

7.1.4.5.13 Radioactive material shall be segregated sufficiently from crew and passengers. The following values for dose shall be used for the purpose of calculating segregation distances or dose rates:

.1 for crew in regularly occupied working areas, a dose of 5 mSv in a year;

.2 for passengers, in areas where the passengers have regular access, a dose of 1 mSv in a year, taking account of the exposures expected to be delivered by all other relevant sources and practices under control.

7.1.4.5.14 Category II-YELLOW or III-YELLOW packages or overpacks shall not be transported in spaces occupied by passengers, except those exclusively reserved for couriers specially authorized to accompany such packages or overpacks.

7.1.4.5.15 Any group of packages, overpacks and freight containers containing fissile material stored in transit in any one storage area shall be so limited that the total sum of the criticality safety indexes in the group does not exceed 50. Each group shall be stored so as to maintain a spacing of at least 6 m from other such groups.

7.1.4.5.16 Where the total sum of the criticality safety indexes on board a conveyance or in a freight container exceeds 50, as permitted in the table under 7.1.4.5.3.4, storage shall be such as to maintain a spacing of at least 6 m from other groups of packages, overpacks or freight containers containing fissile material or other conveyances carrying radioactive material.

7.1.4.5.17 Any departure from the provisions in 7.1.4.5.15 and 7.1.4.5.16 shall be approved by the Administration and, when requested, by the competent authority at each port of call.

7.1.4.5.18 The segregation requirements specified in 7.1.4.5.13 may be established in one of the following two ways:

- by following the segregation table for persons (table 7.1.4.5.18) in respect of living quarters or spaces regularly occupied by persons.
- by demonstration that, for the following indicated exposure times, the direct measurement of the dose rate in regularly occupied spaces and living quarters is less than:

  for the crew:

  0.0070 mSv/h up to 700 h in a year, or

  0.0018 mSv/h up to 2750 h in a year; and

  for the passengers:

  0.0018 mSv/h up to 550 h in a year,

  taking into account any relocation of cargo during the voyage. In all cases, the measurements of dose rate must be made and documented by a suitably qualified person.

7.1.4.6 Stowage of dangerous goods under temperature control

7.1.4.6.1 When stowage arrangements are made, it shall be borne in mind that it may become necessary to take the appropriate emergency action, such as jettisoning or flooding of the container with water, and the temperature needs to be monitored in accordance to 7.3.7. If, during transport, the control temperature is exceeded, an alerting procedure shall be initiated involving either repair of the refrigeration machinery or an increase in the cooling capacity (such as by adding liquid or solid refrigerants). If an adequate cooling capacity is not restored, emergency procedures shall be started.

7.1.4.7 Stowage of stabilized dangerous goods

△ For substances, for which the word “STABILIZED” is added as part of the proper shipping name of the substances in accordance with 3.1.2.6, Stowage Category D and SW1 shall apply.

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Table 7.1.4.5.18 – *CLASS 7 – Radioactive material*
Segregation table for persons

Sum of transport indices (TI)	Segregation distance of radioactive material from passengers and crew			
	General cargo ship[1]		Ferry, etc.[2]	Offshore support vessel[3]
	Break bulk (m)	Containers (TEUs)[4]		
Up to 10	6	1	Stow at bow or stern furthest from living quarters and regularly occupied work areas	Stow at stern or at platform midpoint
More than 10 but not more than 20	8	1	as above	as above
More than 20 but not more than 50	13	2	as above	not applicable
More than 50 but not more than 100	18	3	as above	not applicable
More than 100 but not more than 200	26	4	as above	not applicable
More than 200 but not more than 400	36	6	as above	not applicable

[1] General cargo, break bulk or ro-ro containership of 150 m minimum length.
[2] Ferry or cross channel, coastal and inter-island ship of 100 m minimum length.
[3] Offshore support vessel of 50 m minimum length (in this case the practical maximum sum of TIs carried is 20).
[4] TEU means "20 ft Equivalent Unit" (this is equivalent to a standard freight container of 6 m nominal length).

7.1.5 Stowage codes

The stowage codes given in column 16a of the Dangerous Goods List are as specified below:

Stowage code	Description
SW1	Protected from sources of heat.
SW2	Clear of living quarters.
SW3	Shall be transported under temperature control.
SW4	Surface ventilation is required to assist in removing any residual solvent vapour.
SW5	If under deck, stow in a mechanically ventilated space.
SW6	When stowed under deck, mechanical ventilation shall be in accordance with SOLAS regulation II-2/19 (II-2/54) for flammable liquids with flashpoint below 23°C c.c.
SW7	As approved by the competent authorities of the countries involved in the shipment.
SW8	Ventilation may be required. The possible need to open hatches in case of fire to provide maximum ventilation and to apply water in an emergency, and the consequent risk to the stability of the ship through flooding of the cargo spaces, shall be considered before loading.
SW9	Provide a good through ventilation for bagged cargo. Double strip stowage is recommended. The illustration in 7.6.2.7.2.3 shows how this can be achieved. During the voyage regular temperature readings shall be taken at varying depths in the hold and recorded. If the temperature of the cargo exceeds the ambient temperature and continues to increase, ventilation shall be closed down.
SW10	Unless carried in closed cargo transport units, bales shall be properly covered by tarpaulins or the like. Cargo spaces shall be clean, dry and free from oil or grease. Ventilator cowls leading into the cargo space shall have sparking-preventing screens. All other openings, entrances and hatches leading to the cargo space shall be securely closed. During temporary interruption of loading, when the hatch remains uncovered, a fire-watch shall be kept. During loading or discharge, smoking in the vicinity shall be prohibited and fire-fighting appliances kept ready for immediate operation.

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Stowage code	Description
SW11	Cargo transport units shall be shaded from direct sunlight. Packages in cargo transport units shall be stowed so as to allow for adequate air circulation throughout the cargo.
SW12	Taking account of any supplementary requirements specified in the transport documents.
SW13	Taking account of any supplementary requirements specified in the competent authority approval certificate(s).
SW14	Category A only if the special stowage provisions of 7.4.1.4 and 7.6.2.8.4 are complied with.
SW15	For metal drums, stowage category B.
SW16	For unit loads in open cargo transport units, stowage category B.
SW17	Category E, for closed cargo transport unit and pallet boxes only. Ventilation may be required. The possible need to open hatches in case of fire to provide maximum ventilation and to apply water in an emergency, and the consequent risk to the stability of the ship through flooding of the cargo space, shall be considered before loading.
SW18	Category A, when transported in accordance with P650.
SW19	For batteries transported in accordance with special provisions 376 or 377, category C, unless transported on a short international voyage.
SW20	For uranyl nitrate hexahydrate solution stowage, category D applies.
SW21	For uranium metal pyrophoric and thorium metal pyrophoric stowage, category D applies.
△ SW22	For AEROSOLS with a maximum capacity of 1 L: category A. For AEROSOLS with a capacity above 1 L: category B. For WASTE AEROSOLS or WASTE GAS CARTRIDGES: category C, clear of living quarters.
SW23	When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
SW24	For special stowage provisions, see 7.4.1.3 and 7.6.2.7.2.
SW25	For special stowage provisions, see 7.6.2.7.3.
SW26	For special stowage provisions, see 7.4.1.4 and 7.6.2.11.1.1.
SW27	For special stowage provisions, see 7.6.2.7.2.1.
SW28	As approved by the competent authority of the country of origin.
SW29	For engines or machinery containing fuels with flashpoint equal or greater than 23°C, stowage Category A.
SW30	For special stowage provisions, see 7.1.4.4.5.

7.1.6 Handling codes

The handling codes given in column 16a of the Dangerous Goods List are as specified below:

Handling code	Description
H1	Keep as dry as reasonably practicable.
H2	Keep as cool as reasonably practicable.
H3	During transport, it should be stowed (or kept) in a cool ventilated place.
H4	If cleaning of cargo spaces has to be carried out at sea, the safety procedures followed and standard of equipment used shall be at least as effective as those employed as industry best practice in a port. Until such cleaning is undertaken, the cargo spaces in which the asbestos has been carried shall be closed and access to those spaces shall be prohibited.
■ H5	Avoid handling the packaging or large packaging or keep handling to a minimum. Inform the appropriate public health authority or veterinary authority where persons or animals may have been exposed.