

Stowage and segregation IMDG Code 37-14

Title	IMDG Code 2014 / PART 7 / 7.1.3
Note	Incorporating Amendment 37-14

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. (

 Replaced by [Res.MSC.372\(93\)](#)

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 7.1.4.4.5

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 7.1.4.4.5

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 7.1.4.4.5

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 7.1.4.4.5

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:(

 Replaced by [Res.MSC.372\(93\)](#)

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

7.1.5 Stowage Codes (👉 Inserted by Res.MSC.372(93))

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.
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 SP 376 or SP 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 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: 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.

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7.1.6 Handling Codes (👉 Inserted by [Res.MSC.372\(93\)](#))

The handling codes given in column 16a of the dangerous goods list are as specified below:

Handling Codes	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
H14	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.

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7.2.4 Segregation table (👉 Replaced by [Res.MSC.372\(93\)](#))

The general provisions for segregation between the various classes of dangerous goods are shown in the “segregation table” given below.

Since the properties of substances, materials or articles within each class may vary greatly, the dangerous goods list shall always be consulted for particular provisions for segregation as, in the case of conflicting provisions, these take precedence over the general provisions.

Segregation shall also take account of a single subsidiary risk label.

CLASS		1.1 1.2 1.5	1.3 1.6	1.4	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8	9
Explosives	1.1, 1.2, 1.5	*	*	*	4	2	2	4	4	4	4	4	4	2	4	2	4	X
Explosives	1.3, 1.6	*	*	*	4	2	2	4	3	3	4	4	4	2	4	2	2	X
Explosives	1.4	*	*	*	2	1	1	2	2	2	2	2	2	X	4	2	2	X
Flammable gases	2.1	4	4	2	X	X	X	2	1	2	2	2	2	X	4	2	1	X
Non-toxic, non-flammable gases	2.2	2	2	1	X	X	X	1	X	1	X	X	1	X	2	1	X	X
Toxic gases	2.3	2	2	1	X	X	X	2	X	2	X	X	2	X	2	1	X	X
Flammable liquids	3	4	4	2	2	1	2	X	X	2	2	2	2	X	3	2	X	X
Flammable solids (including self-reactive substances and solid desensitized explosives)	4.1	4	3	2	1	X	X	X	X	1	X	1	2	X	3	2	1	X
Substances liable to spontaneous combustion	4.2	4	3	2	2	1	2	2	1	X	1	2	2	1	3	2	1	X

Substances which, in contact with water, emit flammable gases	4.3	4	4	2	2	X	X	2	X	1	X	2	2	X	2	2	1	X
Oxidizing substances (agents)	5.1	4	4	2	2	X	X	2	1	2	2	X	2	1	3	1	2	X
Organic peroxides	5.2	4	4	2	2	1	2	2	2	2	2	X	1	3	2	2	X	
Toxic substances	6.1	2	2	X	X	X	X	X	X	1	X	1	1	X	1	X	X	X
Infectious substances	6.2	4	4	4	4	2	2	3	3	3	2	3	3	1	X	3	3	X
Radioactive material	7	2	2	2	2	1	1	2	2	2	2	1	2	X	3	X	2	X
Corrosive substances	8	4	2	2	1	X	X	X	1	1	1	2	2	X	3	2	X	X
Miscellaneous dangerous substances and articles	9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

The numbers and symbols in the table have the following meanings:

1 - "Away from";

2 - "Separated from";

3 - "Separated by a complete compartment or hold from";

4 - "Separated longitudinally by an intervening complete compartment or hold from".

X - The Dangerous Goods List has to be consulted to verify whether there are specific segregation provisions.

* - See 7.2.7.1 of this chapter for the segregation provisions between class 1 substances or articles.

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7.2.5 Segregation groups

7.2.5.1 For the purpose of segregation, dangerous goods having certain similar chemical properties have been grouped together in segregation groups as listed in 7.2.5.2. The entries allocated to these segregation groups are listed in 3.1.4.4. Where in the Dangerous Goods List entry in column 16b a particular segregation requirement refers to a group of substances, such as "acids", the particular segregation requirement applies to the goods allocated to the respective segregation group. (👉 Replaced by [Res.MSC.372\(93\)](#))

7.2.5.2 Segregation groups referred to in the Dangerous Goods List:

- .1 acids
- .2 ammonium compounds
- .3 bromates
- .4 chlorates
- .5 chlorites
- .6 cyanides
- .7 heavy metals and their salts (including their organometallic compounds)
- .8 hypochlorites
- .9 lead and its compounds
- .10 liquid halogenated hydrocarbons
- .11 mercury and mercury compounds
- .12 nitrites and their mixtures
- .13 perchlorates
- .14 permanganates
- .15 powdered metals
- .16 peroxides

.17 azides

.18 alkalis.

7.2.5.3 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).

7.2.5.4 The segregation groups in this Code do not cover substances which fall outside the classification criteria of this 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 requirements of a related segregation group on a voluntary basis.

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7.2.8 Segregation Codes (👉 **Inserted by Res.MSC.372(93)**)

The segregation codes given in column 16b of the dangerous goods list are as specified below:

Segregation Codes	Description
SG1	For packages carrying a subsidiary risk of class 1, segregation as for class 1, division 1.3.
SG2	Segregation as for class 1.2G
SG3	Segregation as for Class 1.3G
SG4	Segregation as for class 2.1
SG5	Segregation as for class 3
SG6	Segregation as for class 5.1
SG7	Stow "away from" class 3
SG8	Stow "away from" class 4.1
SG9	Stow "away from" class 4.3
SG10	Stow "away from" class 5.1
SG11	Stow "away from" class 6.2
SG12	Stow "away from" class 7
SG13	Stow "away from" class 8
SG14	Stow "separated from" class 1 except for division 1.4S
SG15	Stow "separated from" class 3
SG16	Stow "separated from" class 4.1
SG17	Stow "separated from" class 5.1
SG18	Stow "separated from" class 6.2
SG19	Stow "separated from" class 7
SG20	Stow "away from" acids
SG21	Stow "away from" alkalis
SG22	Stow "away from" ammonium salts
SG23	Stow "away from" animal or vegetable oils
SG24	Stow "away from" azides
SG25	Stow "separated from" goods of classes 2.1 and 3.

SG26	In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained.
SG27	Stow "away from" explosives containing chlorates or perchlorates
SG28	Stow "away from" ammonium compounds and explosives containing ammonium compounds or salts
SG29	Segregation from foodstuffs as in 7.3.4.2.2, 7.6.3.1.2 or 7.7.3.7.
SG30	Stow "away from" heavy metals and their salts
SG31	Stow "away from" lead and its compounds
SG32	Stow "away from" liquid halogenated hydrocarbons
SG33	Stow "away from" powdered metals
SG34	When containing ammonium compounds, "away from" chlorates or perchlorates and explosives containing chlorates or perchlorates.
SG35	Stow "separated from" acids.
SG36	Stow "separated from" alkalis.
SG37	Stow "separated from" ammonia.
SG38	Stow "separated from" ammonium compounds.
SG39	Stow "separated from" ammonium compounds other than AMMONIUM PERSULPHATE (UN 1444).
SG40	Stow "separated from" ammonium compounds other than mixtures of ammonium persulphates and/or potassium persulphates and/or sodium persulphates.
SG41	Stow "separated from" animal or vegetable oil.
SG42	Stow "separated from" bromates.
SG43	Stow "separated from" bromine.
SG44	Stow "separated from" CARBON TETRACHLORIDE (UN 1846).
SG45	Stow "separated from" chlorates.
SG46	Stow "separated from" chlorine.
SG47	Stow "separated from" chlorites.
SG48	Stow "separated from" combustible material (particularly liquids). Combustible material does not include packing materials or dunnage.
SG49	Stow "separated from" cyanides
SG50	Segregation from foodstuffs as in 7.3.4.2.1, 7.6.3.1.2 or 7.7.3.6.
SG51	Stow "separated from" hypochlorites
SG52	Stow "separated from" iron oxide
SG53	Stow "separated from" liquid organic substances
SG54	Stow "separated from" mercury and mercury compounds
SG55	Stow "separated from" mercury salts
SG56	Stow "separated from" nitrites
SG57	Stow "separated from" odour-absorbing cargoes
SG58	Stow "separated from" perchlorates
SG59	Stow "separated from" permanganates

SG60	Stow "separated from" peroxides
SG61	Stow "separated from" powdered metals
SG62	Stow "separated from" sulphur
SG63	Stow "separated longitudinally by an intervening complete compartment or hold from" Class 1.
SG64	Reserved
SG65	Stow "separated by a complete compartment or hold from" class 1 except for division 1.4.
SG66	Reserved
SG67	Stow "separated from" division 1.4 and "separated longitudinally by an intervening complete compartment or hold from" divisions 1.1, 1.2, 1.3, 1.5 and 1.6 except from explosives of compatibility group J.
SG68	If flashpoint 60°C c.c. or below, segregation as for class 3, but "away from" class 4.1.
SG69	For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
SG70	For arsenic sulphides, "separated from" acids
SG71	Within the appliance, to the extent that the dangerous goods are integral parts of the complete life-saving appliance, there is no need to apply the provisions on segregation of substances in chapter 7.2.
SG72	See 7.2.6.3.2.
SG73	Reserved
SG74	Segregation as for 1.4G.
SG75	Stow "separated from" strong acids.