

Pilotage Advisory Committee

Consequential Amendments to the Pilotage Ordinance
as part of
the Dangerous Goods (Miscellaneous Amendments) Ordinance 2021

The purpose of this paper is to inform members of the Consequential Amendments to the Pilotage Ordinance (Cap. 84) as a result of the amendments to the Dangerous Goods Ordinance (Cap. 295) which will come into operation on 31 March 2022.

2. The amended Cap. 295 and its subsidiary legislation provide new classification and regulatory system for Dangerous Goods (DGs) to align with the commonly adopted international standards under the International Maritime Dangerous Goods Code (IMDG Code). Categories 1 and 2 DGs in the current domestic classifications will be revised as Class 1 and Class 2 DGs respectively; and Category 5 DGs will be aligned with Class 3 and Class 3A DGs.

3. As part of the Dangerous Goods (Miscellaneous Amendments) Ordinance 2021, the Dangerous Goods (Shipping) Regulations (Cap. 295C) will be replaced by the Dangerous Goods (Shipping) Regulation 2012 (Cap. 295F). There is no change in the list of the approved petroleum wharves.

4. A mark-up version of the Schedule 1 to Cap. 84 coming into operation on 31 March 2022 is attached at **Annex A** for ease of reference.

5. Members may refer to the Leaflets of Classification of Dangerous Goods (in Chinese and English versions) in **Annex B and C** for details on the Classification of the IMDG Code.

Marine Department
March 2022

Schedule 1

Ships subject to Compulsory Pilotage

1. A ship of 3 000 gross tonnage or over.
2. A ship of 1 000 gross tonnage or over proceeding to or from any wharf specified in Part ~~I of the First Schedule to the Dangerous Goods (Shipping) Regulations (Cap. 295 sub. leg. C)~~ 1 of Schedule 1 to the Dangerous Goods (Shipping) Regulation 2012 (Cap. 295 sub. leg. F).
3. A ship of 1 000 gross tonnage or over carrying— ~~dangerous goods specified in Categories 1, 2 and 5 in the Schedule to the Dangerous Goods (Application and Exemption) Regulations (Cap. 295 sub. leg. A)~~.
 - (a) Class 1 dangerous goods;
 - (b) Class 2 dangerous goods;
 - (c) Class 3 dangerous goods; or
 - (d) Class 3A dangerous goods,as defined by section 2 of the Dangerous Goods (Shipping) Regulation 2012 (Cap. 295 sub. leg. F).
4. A ship of 1 000 gross tonnage or over proceeding to or from a Government mooring buoy.
5. A ship of 300 gross tonnage or over which—
 - (a) is, for any reason, unable to proceed under its own power, manoeuvre with its own steering gear, or work with its own anchors;
 - (b) has any part of the hull structure removed, or under repair, which may affect the water-tight integrity of the ship; or
 - (c) is at risk of causing injury to persons or damage to property, any other ship or the environment by virtue of the condition of the ship or the nature or condition of its cargo.
6. A gas carrier as defined in regulation 2 of the Merchant Shipping (Safety) (Gas Carriers) Regulations (Cap. 369 sub. leg. Z).

《危險品分類》

根據《國際海運危險貨物規則》，危險品分為九大類，有些類別按性質又分為若干小類，摘要如下：

第 1 類 爆炸品

此類危險品按危險性分為 6 類：

第 1.1 類 具有整體爆炸危險的物質和物品

第 1.2 類 具有拋射危險但無整體爆炸危險的物質和物品

第 1.3 類 具有燃燒危險和有較小爆炸或較小拋射危險或同時具有此兩種危險，但無整體爆炸危險的物質和物品

本類物質和物品包括：

- (1) 產生相當大的輻射熱者；或
- (2) 相繼燃燒，產生較小爆炸或拋射作用，或同時產生此兩種作用者。

第 1.4 類 無重大危險的物質和物品

本類包括在運輸中萬一發生點燃或起爆時只有很小危險的物質和物品。
危險效應主要限於包件本身，其碎片拋射的規模和射程均微不足道。

第 1.5 類 具有整體爆炸危險但極不敏感的物質

本類包括有整體爆炸危險但極不敏感的物質，此類物質在正常運輸情況下發生爆炸或由燃燒轉變成爆炸的可能性極小。

第 1.6 類 不具有整體爆炸危險的極不敏感物質

本類僅含主要由極不敏感爆炸物質組成的物品，有關物品因意外起爆或傳爆的可能性可以忽略。



**標示類別的位置

*標示配裝類的位置

註：若爆炸品屬次要危險性，則無須標示*及**



第 2 類 氣體

在標準大氣壓力下而溫度為 20°C 時，完全呈氣態的物質。

氣體的運輸條件根據其物理狀態描述如下：

- (1) 壓縮氣體：在壓力下包裝供運輸時，當處於 -50°C，完全呈氣態的氣體；
- (2) 液化氣體：在壓力下包裝供運輸時，當溫度高於 -50°C，部分呈液態的氣體；
- (3) 冷凍液化氣體：包裝供運輸時，因低溫而部分呈液態的氣體；
- (4) 溶解氣體：在壓力下包裝供運輸時，溶解在溶劑中的氣體；
- (5) 吸附性氣體：包裝供運輸時吸附到固體多孔材料上的氣體。

根據氣體在運輸過程中的主要危險性，此類危險品細分為 3 個小類：

第 2.1 類 易燃氣體



第 2.2 類 非易燃、無毒氣體



第 2.3 類 有毒氣體



第 3 類 易燃液體

在等於或低於 60°C 時放出易燃蒸氣的液體或液體混合物。

本類物質包括：

- (1) 易燃液體；
- (2) 液體退敏爆炸品。



第 4 類 易燃固體、易自燃物質、遇水放出易燃氣體的物質

易燃物質包括在運輸情況下易於燃燒或可能引起或導致起火的物質，但不包括爆炸品。

此類危險品細分為 3 個小類：

第 4.1 類 易燃固體

本類物質包括：

- (1) 易燃固體和受摩擦可以引起燃燒的固體；
- (2) 自反應的固體和液體物質
此類物質是遇熱不穩定物質，即使在沒有氧氣的情況下，也易產生強烈的放熱分解；
- (3) 固體退敏爆炸品
固體退敏爆炸品是用水或酒精濕潤或用其他物質稀釋形成一種均勻的固體混合物以抑制其爆炸性質的爆性物質；及
- (4) (被穩定的) 聚合性物質及其混合物
此類物質是指在正常運輸條件及沒有被穩定的情況下，容易產生強烈發熱反應，因而構成更大的分子或構成聚合物；



第 4.2 類 易自燃物質

本類物質在運輸時的正常條件下可能自行發熱，與空氣接觸時亦或會升溫，因而有機會起火燃燒；以及



第 4.3 類 遇水放出易燃氣體的物質

本類物質通過與水反應容易自行燃燒或放出達到危險數量的易燃氣體。



第 5 類 氧化物質、有機過氧化物

此類危險品分為 2 類：

第 5.1 類 氧化物質

本類物質其本身未必可燃，但通常因釋放出氧氣而導致其他物料燃燒。此物質會增加與其接觸的可燃物質發生火災的危險性和劇烈程度。



第 5.2 類 有機過氧化物

本類物質為遇熱不穩定物質，可發熱並自行加速分解。此外，還可能具有一種或多種以下性質：

- 易發生爆炸性的分解；
- 迅速燃燒；
- 對撞擊和摩擦敏感；
- 與其他物質起危險反應；
- 損害眼睛。



第 6 類 有毒物質、感染性物質

此類危險品細分為 2 個小類：

第 6.1 類 有毒物質

如吞嚥、吸入或皮膚接觸到本類物質，易於造成死亡、嚴重傷害或損害人體健康。



第 6.2 類 感染性物質

本類物質是指含有已知或有理由相信含有病原體的物質。



第 7 類 放射性物質

本類物質是指含有放射性核素的物質。



I



II



III



裂變性

包裝的放射物質是根據其運輸指數和表面輻射水平而作出不同的標記。

I 級 - 白色標誌：表示其運輸指數和表面輻射水平最低

II 級 - 黃色標誌：表示其運輸指數和表面輻射水平高於 I 級

III 級 - 黃色標誌：表示其運輸指數和表面輻射水平高於 II 級

裂變性：表示含有裂變物質

第 8 類 腐蝕性物質

本類物質通過化學反應能對皮膚造成不可逆轉的損傷，或在發生洩漏的情況下，嚴重損毀甚至破壞其他貨物或運輸工具。



第 9 類 雜類危險物質

本類物質包括未列入其他類別的物質和物品，其危險特性已經證實顯示或可能顯示屬經修訂的《1974 年國際海上人命安全公約》第 VII 章 A 部分規定適用者；及上述公約第 VII 章 A 部分規定不適用，但經修訂的 MARPOL 公約附則 III 適用的物質。

本類物質包括但不限於：

- (1) 在等於或高於 100°C 高溫條件下運輸或交付運輸的液態物質，以及在等於或高於 240°C 高溫條件下運輸或交付運輸的固體物質；
- (2) 鋰電池。



危險品分類簡介



如有查詢，請致電海事處危險貨物小組

電話：2852 4913



香港特別行政區政府海事處
Marine Department, HKSARG

2021年12月







有關資訊請瀏覽海事處網頁 https://www.mardep.gov.hk/hk/ele_services/dgis.html
國際海事組織不時對《國際海運危險貨物規則》作出修訂，有關危險品的分類以該最新修訂的版本為準。

CLASSIFICATION OF DANGEROUS GOODS

Substances and articles subject to the provisions of the International Maritime Dangerous Goods Code are assigned to one of the classes 1-9. Some of these classes are subdivided into divisions. They are listed below :

Class 1 Explosives

The six hazard divisions of class 1 are:

- | | | | |
|---------------------|--|---|---|
| Division 1.1 | Substances and articles which have a mass explosion hazard |  | **Place for division |
| Division 1.2 | Substances and articles which have a projection hazard but not a mass explosion hazard |  | *Place for compatibility group |
| Division 1.3 | Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard
This division comprises substances and articles :
(1) which give rise to considerable radiant heat ; or
(2) which burn one after another, producing minor blast or projection effects or both. |  | Remark : * or ** to be left blank if the explosive is a subsidiary hazard |
| Division 1.4 | Substances and articles which present no significant hazard
This division comprises substances and articles which present only a small hazard in the event of ignition or initiation during transport.
The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. |  | |
| Division 1.5 | Very insensitive substances which have a mass explosion hazard
This division comprises substances which have a mass explosion hazard but are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport. |  | |
| Division 1.6 | Extremely insensitive articles which do not have a mass explosion hazard
This division comprises articles which predominantly contain extremely insensitive substances and which demonstrate a negligible probability of accidental initiation or propagation. |  | |

Class 2 Gases

Substances which are completely gaseous at 20°C at a standard pressure.

The transport condition of a gas is described according to its physical state as:

- (1) compressed gas : a gas which when packaged under pressure for transport is entirely gaseous at -50°C;
- (2) liquefied gas : a gas which when packaged under pressure for transport is partially liquid at temperatures above -50 °C;
- (3) refrigerated liquefied gas : a gas which when packaged for transport is made partially liquid because of its low temperature;
- (4) dissolved gas : a gas which when packaged under pressure for transport is dissolved in a liquid phase solvent;
- (5) adsorbed gas : a gas which when packaged for transport is adsorbed onto a solid porous material.

This class is subdivided further according to the primary hazard of the gas during transport:

Class 2.1 Flammable gas



Class 2.2 Non-flammable, non-toxic gases



Class 2.3 Toxic gases



Class 3 Flammable liquids

Liquids, or mixtures of liquids, which give off a flammable vapor at or below 60°C.

Class 3 includes the following substances:

- (1) flammable liquids ;
- (2) liquid desensitized explosives.



Class 4 Flammable solids; substances liable to spontaneous combustion; substances which, in contact with water, emit flammable gases

Substances, other than those classified as explosives, which, under conditions of transport, are readily combustible or may cause or contribute to a fire.

This class is subdivided as follows:

Class 4.1 Flammable solid

This Class 4.1 includes the following types of substances:

- (1) Flammable solids
Readily combustible solids and solids which may cause fire through friction;
- (2) Self-reactive substances
Thermally unstable substances liable to undergo a strongly exothermic decomposition even without participation of oxygen;
- (3) Solid desensitized explosives
Explosive substances which are wetted with water or alcohol or are diluted with other substances to form a homogeneous solid mixture to suppress their explosive properties; and
- (4) Polymerizing substances and mixtures (stabilized)
Substances which, without stabilization, are liable to undergo a strongly exothermic reaction resulting in the formation of larger molecules or resulting in the formation of polymers under conditions normally encountered in transport;



Class 4.2 Substances liable to spontaneous combustion

Substances which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up in contact with air, and being then liable to catch fire; and

Class 4.3 Substances which, in contact with water, emit flammable gases

Substances which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.



Class 5 Oxidizing substances and organic peroxides

This class is divided into two classes:

Class 5.1 Oxidizing substances

Substances which, while in themselves not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material. They can increase the risk and intensity of fire of combustible substances with which they come into contact.



Class 5.2 Organic peroxides

Organic peroxides are thermally unstable substances which may undergo exothermic self-accelerating decomposition. In addition, they may have one or more of the following properties:

- Be liable to explosive decomposition;
- Burn rapidly;
- Be sensitive to impact or friction;
- React dangerously with other substances;
- Cause damage to the eyes.



Class 6 Toxic and infectious substances

This class is subdivided into two classes:

Class 6.1 Toxic substances

These are substances liable either to cause death or serious injury or to harm human health if swallowed or inhaled, or by skin contact.



Class 6.2 Infectious substances

These are substances known or reasonably expected to contain pathogens.



Class 7 Radioactive material

Radioactive material means any material containing radionuclides.



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FISSILE

Radioactive material in packaged form shall be assigned to a category in accordance with the transport index and maximum dose rate on external surface.

Category I - WHITE : Indicate that the transport index and maximum dose rate are low

Category II - YELLOW : Indicate that those are higher than Category I

Category III - YELLOW : Indicate that those are higher than Category II

FISSILE : Contain fissile material

Class 8 Corrosive

This class of substances which, by chemical action, will cause irreversible damage to the skin, or, in the case of leakage, will materially damage, or even destroy, other goods or the means of transport.



Class 9 Miscellaneous dangerous substances

This class includes substances and articles not covered by other classes which experience has shown, or may show, to be of such a dangerous character that the provisions of part A of chapter VII of SOLAS, as amended, shall apply; and substances not subject to the provisions of part A in chapter VII of the aforementioned Convention, but to which the provisions of Annex III of MARPOL, as amended, apply.

Substances include but not limited to:

- (1) liquid substances transported or offered for transport at elevated temperature at or above 100° C and below its flashpoint; and solid substances transported or offered for transport at elevated temperature at or above 240°C;
- (2) Lithium battery.



INTRODUCTION TO THE CLASSIFICATION OF DANGEROUS GOODS



For enquiries, please contact the Dangerous Goods Unit of the Marine Department, Tel. No : 2852 4913



Marine Department, HKSARG

December 2021

For more information, please visit the Marine Department website:
https://www.mardep.gov.hk/en/ele_services/dgis.html

The International Maritime Organization revises the "International Maritime Dangerous Goods Code" from time to time. The classification of dangerous goods is subject to the latest revision.