

# Proposed Amendments to Dangerous Goods Regulations

Appendix A

## Information Document

March 1999



Civil Engineering  
Department



Fire Services  
Department



Marine  
Department

## 1. Purpose

1.1 This document introduces the proposed legislative amendments to the Dangerous Goods Ordinance, Chapter 295, Laws of Hong Kong and its 4 Subsidiary Regulations (collectively named “the Legislation”). These proposals include bringing the provisions for classification, labelling and packaging in line with international standards, updating the provisions for exempted quantities and the penalties, and tightening the control over conveyance of dangerous goods other than Category 1 (Explosives), Category 2 (Compressed Gases) and Category 5 (Flammable Liquids).

1.2 Comments on these proposals are hereby invited. Please send your comments to the Fire Services Department (FSD) by mail, facsimile (fax) or electronic-mail (E-mail) at the following addresses before **30 April 1999**:-

	<b><u>FSD</u></b>
<b>Mail</b>	<i>FIRE PROTECTION COMMAND HEADQUARTERS, 5TH FLOOR, FSHQ BUILDING, No. 1 HONG CHONG ROAD, TSIM SHA TSUI EAST, KOWLOON.</i>
<b>Fax</b>	2723 2197
<b>E-mail</b>	<a href="mailto:hkfsdfpb@hkstar.com">hkfsdfpb@hkstar.com</a>

1.3 We would wish either in discussion or in any subsequent report, whether privately or publicly, to be able to refer to and attribute comments submitted in response to this consultation document. Any request to treat all or part of a response in confidence will be respected, but if no such request is made it will be assumed that the response is not intended to be confidential.

## **2. Background**

2.1 The Dangerous Goods Ordinance (the Ordinance), Chapter 295, Laws of Hong Kong is a piece of legislation which provides for the controlling measures of dangerous goods on land and at sea. Under the Ordinance, there are 4 Subsidiary Regulations, which are:-

- Dangerous Goods (Application and Exemption) Regulations
- Dangerous Goods (General) Regulations
- Dangerous Goods (Government Explosives Depots) Regulations
- Dangerous Goods (Shipping) Regulations

2.2 “The Legislation” now stipulates about 400 types of dangerous goods which are classified into 10 Categories in accordance with their characteristics, e.g. inflammable, toxic, corrosive, spontaneous combustible, dangerous when wet, etc. In addition to the classification of such goods, “the Legislation” also provides for the control of such goods in other aspects, including proper labelling and packaging of such goods, safety precautions during manufacture, storage, use or conveyance of such goods on land and safety measures in the course of shipment and transshipment of such goods.

2.3 Presently, the provisions for classification, labelling and packaging are different in many ways from the United Nations' (UN') Recommendations and International Maritime Dangerous Goods (IMDG) Code, on which most overseas countries' dangerous goods legislation is based. When dangerous goods are imported, exported or re-exported, they are required to comply with two distinctive sets of requirements prevailing in Hong Kong and other countries. This has created practical difficulty to the local trades and users. Furthermore, these international standards have stipulated a total of about 2,000 types of dangerous goods and that most of these dangerous goods are often found in Hong Kong but are not covered by "the Legislation". In order to bring these provisions in line with the international standards, the Commissioner of Mines of the Civil Engineering Department (CED), Director of Fire Services and Director of Marine (i.e. the controlling authorities under "the Legislation") had carried out a comprehensive review of the provisions within the purview of their Departments. The Review also covered the provisions for *exempted quantities* (#see the meaning in para. 3.2.4.1 below) and the penalties for offences under "the Legislation".

2.4 In addition to the above review, the Director of Fire Services had also engaged a consultant to study the conveyance of dangerous goods other than Category 1 (Explosives), Category 2 (Compressed Gases) and Category 5 (Flammable Liquids) on road by vehicles in the wake of the cyanide spillage incident at Tai Po Road occurred in December 1997. This study was completed in late December 1998 and it was recommended that the proposed measures for strengthening the control over the conveyance of these goods on road by vehicles should be included into the above proposals as one package.

2.5 The Government is undertaking a territory-wide consultation on the proposals to amend "the Legislation". Comments on such proposals are much welcome.

### **3. The Proposals**

The following paragraphs give more detailed information on the proposed amendments to “the Legislation”.

#### **3.1 Scope of Amendments**

The proposed amendments include the provisions for the following controlling measures:-

- Classification;
- Labelling;
- Packaging;
- Exempted Quantities;
- Conveyance of dangerous goods other than Categories 1, 2 and 5 on road by vehicles; and
- Penalties

#### **3.2 Detailed Proposals**

##### **3.2.1 Classification**

3.2.1.1 In view that most dangerous goods in Hong Kong are imported and exported by sea, we propose the classification of dangerous goods in Hong Kong to follow the IMDG Code with minor variations to suit local circumstances where appropriate. To that effect, the dangerous goods listed in “the Legislation” will be

classified into 9 Classes (currently there are 10 Categories). The proposed Class 3 includes Classes 3.1, 3.2, 3.3 and 3.4. The proposed Class 4 includes Classes 4.1, 4.2 and 4.3. The proposed Classes 5 and 6 include Classes 5.1 and 5.2 and Classes 6.1 and 6.2 respectively. With these changes, the classification system currently stipulated in the Dangerous Goods (Application and Exemption) Regulations will be substantially revised. Having said that, there will however, be some difference between the list of dangerous goods for which the control on land and the list for which the control at sea shall apply (see the following paragraphs).

3.2.1.2 We plan to reclassify the dangerous goods currently stipulated in the Dangerous Goods (Application and Exemption) Regulations in accordance with the IMDG Code and set out such goods in a list conforming to the classification under the IMDG Code. In addition to these goods, we also plan to include all dangerous goods currently listed in the IMDG Code (1997 Edition) into that list with the exception of dangerous goods in Class 1, Class 6.2 and Class 7 and some other dangerous goods (see paragraphs 3.2.1.3 to 3.2.1.6 below). To that effect, the total number of dangerous goods in that list will be increased to about 1,600. Any goods appearing in that list shall be subject to “the Legislation” ‘s control on land.

3.2.1.3 Regarding the control over shipment and transshipment of dangerous goods at sea, we propose that any goods stipulated in IMDG Code shall be subject to the control of the Dangerous Goods (Shipping) Regulations. As the list of dangerous goods to be applied on land is slightly different from that at sea a provision will be introduced to provide for the interface between the control at sea and control on land.

3.2.1.4 Presently, infectious substances and radioactive substances are not included in the Dangerous Goods (Application and Exemption) Regulations. That is to say, such goods are not controlled by “the Legislation”. In fact, such goods are being controlled under the Pharmacy and Poisons Ordinance (Chapter 138, Laws of Hong Kong) and the Radiation Ordinance (Chapter 303, Laws of Hong Kong). To

maintain this position, we propose that dangerous goods currently stipulated in Class 6.2 (Infectious substances) and Class 7 (Radioactive substances) of the IMDG Code should not be included into the list referred to in paragraph 3.2.1.2 and thus, “the Legislation” ‘s control on land shall not apply to such goods.

3.2.1.5 In addition, the proposed list of dangerous goods for which “the Legislation” ‘s control on land applied will also be different in some other ways from that under the IMDG Code. Firstly, the IMDG Code does not regard diesel oil and furnace oil with a flash point over 61°C (i.e. dangerous goods in the existing Category 5, Class 3) as dangerous goods. However, we propose to introduce a Class 3.4 to cover such goods with a view to maintaining the control over such goods both on land and at sea. Similarly, we also propose to introduce a Class 9A to incorporate matches/plastics/rubber, etc. currently stipulated in Category 9A of “the Legislation” to maintain the control over the storage of such goods on land. However, we do not intend to extend this variation to the IMDG Code to cover the control over shipment and transshipment of such goods. Secondly, we also plan to maintain the current position of excluding certain goods, e.g. asbestos, ammonium nitrate fertilizers, etc. from “the Legislation” ‘s control on land albeit such goods are currently stipulated in the IMDG Code. To that effect, such goods will not be incorporated into the list referred to in paragraph 3.2.1.2. However, we propose that such goods should be subject to “the Legislation” ‘s control at sea under the Dangerous Goods (Shipping) Regulations.

3.2.1.6 Furthermore, as regards dangerous goods in Class 1 (Explosives), we plan to introduce a registration system under “the Legislation”. Any person who wishes to manufacture, store, use or convey any explosives in Hong Kong is required to apply for registration of such explosives with the Commissioner of Mines, otherwise he/she shall commit an offence. The register of explosives will be revised and published in the gazette by the Commissioner of Mines from time to time.

3.2.1.7 A comparison of the proposed classification system and the existing classification system is at **Annex I**. Your attention is, in particular, drawn to the difference between the flash points in the definitions of the existing Category 5 and the proposed Class 3.

### **3.2.2 Labelling**

3.2.2.1 We propose that the labelling of dangerous goods should follow the IMDG Code with minor variations where appropriate. For IMDG Code's dangerous goods labels, there may or may not be literal descriptions of the risks concerned. If literal descriptions are shown, the language used to describe the risks is optional to the local authorities. With this option, we propose that Hong Kong's dangerous goods labels should bear both Chinese and English descriptions with a view to making them more user friendly, especially to members of the general public. The English descriptions will follow IMDG Code's recommendations whereas the Chinese descriptions will follow the “國際海上危險貨物運輸規則” issued by the Central People's Government of the People's Republic of China.

3.2.2.2 To that effect, the dangerous goods labels currently specified in the First Schedule to the Dangerous Goods (General) Regulations have to be replaced completely. However, we intend that such proposed labels should be applied to dangerous goods on land only. As regards the shipment and transshipment of dangerous goods at sea or when the dangerous goods are conveyed on land through Hong Kong as part of their international journey, we propose that either such bilingual labels or the IMDG Code's labels shall be acceptable and applicable. This is for the purpose of facilitating the shipment, transshipment and conveyance on land of such goods across the territory.



3.2.2.3 With a view to conforming to the international rules, we also plan to introduce a provision to require freight containers used to convey dangerous goods to bear the labels of such goods. Again, we propose that such labels should either conform to the labels as proposed in para. 3.2.2.1 above or conform to the IMDG Code's labels.

3.2.2.4 A comparison between the existing and the proposed dangerous goods labels is at **Annex II**. More specifically, we propose that the labels should be of diamond shape with their colour, signs and literal descriptions conforming to those shown in Annex II. Furthermore, each type of dangerous goods will be required to have its outer package to bear a "Label of Class" to give warning of the main risk of such goods. If the dangerous goods also possess other subsidiary risk(s), its outer package will have to bear such other label or labels to give warning of the subsidiary risk(s). Your attention is drawn, in particular that only the "Label of Class" will show the Class number on its bottom corner. For subsidiary labels, no Class number will be shown.

### 3.2.3 Packaging

3.2.3.1 Currently, each type of dangerous goods is required to be packed in accordance with the packaging methods stipulated in the Dangerous Goods (General) Regulations to provide proper containment of such goods to safeguard the users and any other persons who may come into contact with such goods. More specifically, such goods is required to be stored inside a proper inner/main packing, which is then required to be enclosed in a proper outer packing to give further containment of such goods. Appropriate absorbent materials may need to be filled inside the space between the inner/main packing and outer packing to absorb any leaked contents or the vibration force. In addition, there are also specific requirements for the percentage of air space (i.e. ullage) inside the inner/main packing, the material used for making the inner/main packing and outer packing and the maximum gross quantity of the contents in each type of inner/main packing, etc..

3.2.3.2 We propose the packaging requirements to follow the IMDG Code, for which there are also specific requirements on the inner/main packing, outer packing and the ullage. However, with regard to the maximum gross quantity of the contents inside the inner/main packing, there will be 3 different levels dependent upon the level of risk of such goods stored inside such packing. In this regard, each type of dangerous goods (except those in Classes 1 and 2 and those possessing some distinctive characteristics) will be given a Packaging Group Number, i.e. Packaging Group I, Packaging Group II and Packaging Group III, representing the level of risk posed by such goods shown below:-

- Packaging Group I (PkG I) - Great Danger
- Packaging Group II (PkG II) - Medium Danger
- Packaging Group III (PkG III) - Minor Danger

3.2.3.3 As regards the packaging requirements for cylinders used to store compressed gases in Class 2 and tanks used to store dangerous goods in liquid form in bulk on land, we propose to depart from the IMDG Code with a view to adopting the current packaging requirements for such goods under Regulation 64 and 99A of the Dangerous Goods (General) Regulations to ensure a more rigid control over such packings on land. That is to say, such cylinders and tanks will be required to be approved by the Director of Fire Services before they can be used to store such goods. However, “the Legislation” only requires the storage tanks for diesel/furnace oil in Category 5, Class 3 (i.e. proposed Class 3.4) to be approved by the Director of Fire Services whereas the tanks used to store other dangerous goods in liquid form in bulk are not subject to such requirement. As such, we propose to extend the above requirement (i.e. for applying the Director’s approval) to the storage tanks for such other dangerous goods in liquid form. Such departure from IMDG Code will

not be applied to dangerous goods at sea. That is to say, the packaging requirements for dangerous goods at sea will follow the IMDG Code.

3.2.3.4 Furthermore, we also plan to follow the UN's Recommendations to exempt small containers of dangerous goods from the proposed labelling and packaging requirements on the ground that the legislation is dedicated to provide for the control of medium and large quantity of dangerous goods. Such "limited quantity" for the dis-application of the provisions for labelling and packaging under "the Legislation" is enclosed in **Annex III**.

#### 3.2.4 Exempted Quantities

# 3.2.4.1 The exempted quantity of dangerous goods means the maximum quantity of such goods, for which the licensing control over the storage, use or conveyance of such goods under Section 6 of the Ordinance shall not apply. The purpose of introducing such provision is to permit certain dangerous goods to be stored, used or conveyed generally in such small quantity that the premises or vehicle concerned need not be subject to the above licensing requirements.

3.2.4.2 Presently, the provisions for exempted quantities are stipulated in the Dangerous Goods (General) Regulations. For dangerous goods in Category 1 (i.e. proposed Class 1) and Category 2 (i.e. proposed Class 2), there is only one level of exempted quantities. However, as regards dangerous goods in other Categories, there are two levels. One level is to be applied generally and the other is to be applied when such goods is used for medical, laboratory purposes, etc. Whether or not a dangerous goods is provided with an exempted quantity is dependent on the risk posed by such goods. For example, there is no exempted quantity provided for the toxic gas "Hydrogen Cyanide".

3.2.4.3 We propose that the provisions for exempted quantities should be revised and updated to suit local circumstances and that such provisions should be removed to the Dangerous Goods (Application and Exemption) Regulations. We plan to introduce two levels of exempted quantities for dangerous goods in Class 2 to Class 9 dependent on whether such goods are used in industrial buildings/premises or non-industrial buildings/premises. Exempted quantities provided for the level of “industrial” will generally be higher than “non-industrial”. When the dangerous goods are used for medical, laboratory purposes, etc, we propose that the level for “industrial” should be applied. As regards dangerous goods in Class 1, we propose to extend the provisions for exempted quantities to cover the storage of certain explosives which are to be used for exigency purposes.

3.2.4.4 In view of the enhancement of fire protection in buildings, we plan to increase the exempted quantities for certain dangerous goods with a view to providing greater flexibility to the trades, in particular those in chemical wastes disposal. Regarding compressed gases in Class 2, we propose to express their exempted quantities in terms of water capacity (currently they are expressed in terms of “number of cylinders”) with a view to giving a more accurate measurement. In simple terms, water capacity means the quantity of water, measured in litres, required to fill the internal volume of a gas cylinder.

3.2.4.5 We propose to extend the aggregate limit currently governing the mixed storage or conveyance of different types of dangerous goods in Category 2 and Category 5, Class 1 and Class 2 to cover dangerous goods in other Classes with a view to avoiding a further increase in the aggregate of quantities over the storage or conveyance of different types of dangerous goods pursuing to the proposed increase in the exempted quantities for dangerous goods. To that effect, if the aggregate of the quantities of any dangerous goods stored in a premises or conveyed on a vehicle exceeds such limit, the licensing control under Section 6 of the Ordinance shall apply whether or not, the exempted quantities for such goods are exceeded.

3.2.4.6 The proposed aggregate limit for dangerous goods in Class 2 will be 450 litres water capacity for “industrial” and 300 litres water capacity for “non- industrial”. In cases where both compressed gases and refrigerated gases are involved, we propose one litre of refrigerated gas to be deemed equivalent to 6 litres water capacity. The proposed aggregate quantity limit for dangerous goods in Classes 3.1 to 3.3 will be 150 litres for “industrial” and 100 litres for “non-industrial”. As regards dangerous goods in Classes 4 to 9, we propose that the aggregate limit should be 1000 litres or kilogrammes for “industrial” and 100 litres or kilogrammes for “non-industrial”. For calculation purpose, we propose that one kilogramme of dangerous goods in Classes 4 to 9 in solid form should be deemed equivalent to one litre of dangerous goods in such Classes in liquid form.

3.2.4.7 With regard to the conveyance of dangerous goods in Classes 2 to 9, we propose that the respective aggregate limits for “non-industrial” should apply.

3.2.4.8 The proposed aggregate limits for governing the storage and conveyance of dangerous goods in different Classes are summarized in **Annex IV** for easy reference.

### 3.2.5 Conveyance

3.2.5.1 Presently, the licensing control under Section 6 of the Ordinance applies to the conveyance on land of dangerous goods in Categories 1, 2 and 5 only (i.e. proposed Classes 1, 2 and 3). The safe conveyance on land of dangerous goods in other Categories is dependent upon the proper packaging and labelling of such goods as well as the proper handling by the persons involved in the conveyance of such goods.

3.2.5.2 The consultant mentioned in paragraph 2.4 above recommends that the control over the conveyance on land of dangerous goods other than Classes 1, 2 and 3 should be strengthened by imposing a package of legislation, similar to that adopted by UK, USA, Australia and Singapore. The main legislative measures recommended by the consultant are as follows:-

- The vehicles used to convey such goods shall be licensed by FSD and that these vehicles shall be permitted to convey together with any other goods, except dangerous goods in Class 1 (Explosives), Class 2 (Compressed Gases) and Class 3 (Flammable Liquids) and certain incompatible goods.
- The above licensing requirement shall not apply when the aggregate of the quantities of such goods does not exceed 100 kg or 100 litres or when such goods are being conveyed on land through Hong Kong as part of their international journey.
- Drivers of these vehicles shall be required to undertake a basic training course and shall be issued with a certificate after completing the course. In the longer term, only those drivers who possess such certificate shall be permitted to convey such goods.
- Consignors of such goods shall provide a transport document and a declaration in writing to the operators of these vehicles (i.e. the persons who undertake to use the vehicles to consign such goods), giving relevant information on such goods, including their classification, quantities, safety instructions, emergency handling procedures, etc. and declaring that such goods are properly packed.

- The operators and drivers shall inspect such goods against the aforesaid document and declaration and shall not commence the journey unless the results of inspection are satisfactory. Such document and declaration shall be passed to the drivers and thence, the consignees together with such goods.
- The operators shall ensure such goods are properly loaded and secured on board the vehicle and shall provide proper placards and emergency equipment to the vehicles.
- The drivers shall observe the safety instructions and emergency procedures for such goods as stipulated in the transport document as well as required to adopt other safety practices, including no smoking, eating, or drinking on board the vehicles, no attempt to unseal the packings of such goods, etc.

3.2.5.3 The above recommendations have been examined and endorsed by the Steering Group for the study, comprising representatives of the Fire Services Department, Electrical and Mechanical Services Department, Environmental Protection Department, Transport Department and Government Laboratory. We propose to introduce new regulations in “the Legislation” to implement such recommendations.

### 3.2.6 Penalties

3.2.6.1 The Ordinance was enacted in 1956 and the penalty provisions were last revised in 1984. As such, we consider it necessary to revise and update the penalty provisions in conjunction with the above review and study.

3.2.6.2 The review of the penalty mentioned in paragraph 2.3 above has taken account of the penalties imposed by court in 1993-1998, the penalty provisions in other legislation and the cumulated inflation since the enactment of the relevant provisions.

3.2.6.3 The above review notes that the composite consumer price indices have increased by about 300% after the enactment of such provisions. As such, the maximum fines under these provisions are proposed to be suitably adjusted with a view to maintaining their deterrent effect. Furthermore, in the wake of the recent incidents involving dangerous goods, we also propose to introduce a higher level of penalties to those persons who are found guilty for the offences regarding to the manufacture, storage, use or conveyance of dangerous goods without a valid licence (Section 6 of the Ordinance refers) or the failure to comply with the licensing conditions (Section 9 of the Ordinance refers) for more than one time. That is to say, the accused is liable to be subject to more severe punishment on a second and subsequent conviction for these two offences.

3.2.6.4 In this regard, we propose to increase all maximum fines under “the Legislation” by 3 to 4 times with the highest maximum fines becoming \$100,000 (currently \$25,000). However, as regards to the second or subsequent conviction of the above two offences, we propose that the penalty for contravening the licensing control (i.e. Section 6 of the Ordinance) shall be subject to a maximum fine of \$200,000 and 12 months imprisonment whereas the penalty for the breach of licensing requirements (i.e. Section 9 of the Ordinance) will be subject to a maximum fine of \$100,000 and 3 months imprisonment.

3.2.6.5 Furthermore, we also plan to express such maximum fines in terms of “level of fines” as stipulated in Schedule 8 of the Criminal Procedure Ordinance (Chapter 221, Laws of Hong Kong) to facilitate future adjustment in accordance with changes in consumer price indices.



### 3.2.7 Other Legislative Amendments

3.2.7.1 With the above changes a provision will be introduced to provide for the interface between the control of dangerous goods at sea and on land. Furthermore, minor consequential legislative amendments will also be made in other legislation, e.g. the Merchant Shipping (Fees) Regulations (Chapter 281, Laws of Hong Kong), Shipping and Port Control Ordinance (Chapter 313, Laws of Hong Kong, Pilotage Ordinance (Chapter 84, Laws of Hong Kong), etc.

3.2.7.2 In addition, we also plan to make other amendments to the legislation. These include the extension of the hydraulic test intervals of certain gas cylinders which are used to store compressed gases for fire suppression purposes and that such cylinders are being secured in a position approved by the Director of Fire Services and less susceptible to damage. To that effect, the first and second hydraulic test intervals of such cylinders as required under “the Legislation” will be extended from 5 years to 10 years.

3.2.7.3 As regards the control over the storage of freight containers loaded with dangerous goods in the container port terminals under the existing Dangerous Goods (General) Regulations, we propose to transfer the controlling authority from the Director of Marine to the Director of Fire Services with a view to streamlining the control of dangerous goods on land and at sea.

3.2.7.4 Furthermore, minor amendments will also be made to the Dangerous Goods (Government Explosives Depots) Regulations to simplify the fee structure for the storage or delivery of explosives.

### 3.3 Controlling Authorities

If the above proposals are implemented, the controlling authorities will be as follows:-

- The Commissioner of Mines will be the controlling authority over dangerous goods in Class 1 (Explosives) on land [existing Category 1]
- The Director of Fire Services will be the controlling authority over dangerous goods in Class 2 (except \* Liquefied Petroleum Gas (LPG)) to Class 9 and Class 9A (including the proposed Class 3.4 (Diesel Oil and Furnace Oil)) on land [existing Categories 2 to 10, including Category 9A].
- The Director of Marine will be the controlling authority over all dangerous goods currently stipulated in the IMDG Code plus the proposed Class 3.4 at sea.
- ★ ● For LPG, the controlling authority will continue to be vested upon with the Director of Electrical and Mechanical Services in accordance with the Gas Safety Ordinance, Chapter 51, Laws of Hong Kong.

### 4. Technical Instructions

The Commissioner of Mines and Director of Fire Services propose to prepare and issue Technical Instructions to give details on the controlling measures on the classification, labelling, packaging and exempted quantities for dangerous goods in Class 1 and Classes 2 to 9A respectively. Apart from these measures, the Technical Instructions will also contain some other information pertaining to such goods, for example their properties, UN numbers, etc. with a view to making the Technical Instructions a self-contained publication on such goods.

## **5. Consultation**

All the above proposals have been submitted to and endorsed by the Dangerous Goods Standing Committee (DGSC), comprising representatives of the relevant government departments, industries and trades. Its function is to constantly review the control over dangerous goods in Hong Kong and to advise the Government on the better control over such goods.

## **6. Enquiry**

For enquiry, you may call the Dangerous Goods Ordinance Review hotline 2733 7590 at the following hours (except Sunday and public holiday):-

(a) Monday to Friday

9:00 am - 12:00 p.m.

14:00 p.m. - 17:00 p.m.

(b) Saturday

9:00 a.m. - 12:00 p.m.

7. **Reference Materials**

*Annex I -* Comparison of the proposed and existing classification systems

*Annex II -* Comparison of the existing and proposed labelling systems

*Annex III* “Limited quantity” for dis-application of labelling and packaging requirements

*Annex IV* Proposed aggregate limits governing the storage and conveyance on land of dangerous goods

**Comparison of the Proposed and  
Existing classification systems**

Properties	Proposed Classification	Existing Classification under DGO
Explosives	Class 1	Category 1
Compressed gases	Class 2	Category 2
Flammable liquids having a flash point below -18°C (0°F) closed cup test	Class 3.1	Category 5 Class 1*
Flammable liquids having a flash point of -18°C (0°F) up to but not including 23°C (73°F) closed cup test	Class 3.2	
Flammable liquids having a flash point of 23°C (73°F) up to and including 61°C (141°F) closed cup test	Class 3.3	Category 5 Class 2*
Flammable liquids having a flash point exceeding 61°C closed cup test	Class 3.4	Category 5 Class 3*
Flammable solids	Class 4.1	Category 8
Substances liable to spontaneous combustion	Class 4.2	Category 9
Substances which become dangerous in contact with water	Class 4.3	Category 6
Oxidizing substances	Class 5.1	Category 7
Organic peroxides	Class 5.2	Category 10
Toxic substances	Class 6.1	Category 4
Corrosives	Class 8	Category 3
Miscellaneous <sup>#</sup>	Class 9	-
Combustible goods exempted from Section 6 to 11 of the Ordinance	Class 9A	Category 9A

*Note:* (i) \*The generic definitions of the existing Class 1, Class 2 and Class 3 in Category 5 are as follows:-

*Class 1 Substances having a flash point below 23°C*

*Class 2 Substances having a flash point of or exceeding 23°C but not exceeding 66°C*

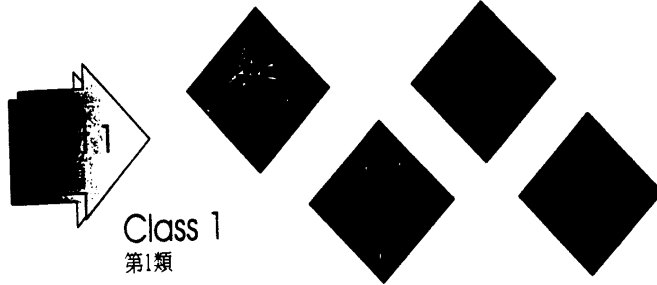
*Class 3 Substances having a flash point of or exceeding 66°C*

(ii) <sup>#</sup>Most of the dangerous goods in the proposed Class 9 are currently not stipulated under “the Legislation”.

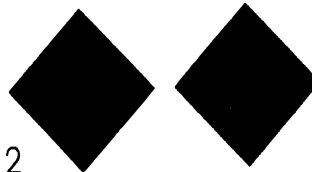
(iii) “Closed Cup Test” means a testing method conforming to British Standard BS2000 Part 170 or equivalent where a closed receptacle apparatus is utilized to determine the flash point of a flammable liquid.

# Comparison of the Existing and Proposed Labelling systems

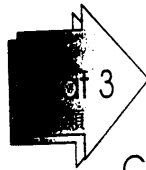
現行和建議的標籤制度比較



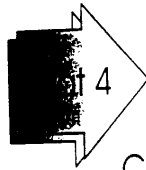
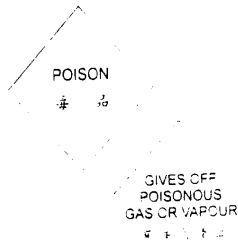
Class 1  
第1類



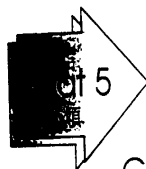
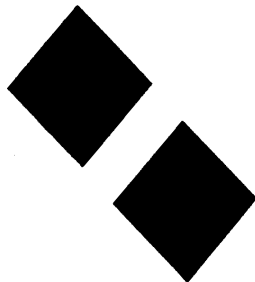
Class 2  
第2類



Class 8  
第8類



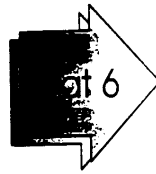
Class 6.1  
第6.1類



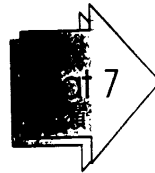
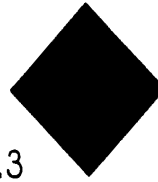
Class 3  
第3類

**ANNEX II (cont'd)**

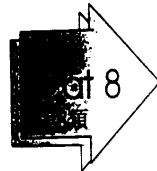
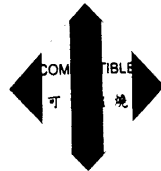
附件II(續)



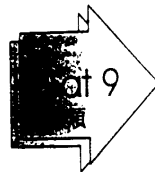
**Class 4.3**  
第4.3類



**Class 5**  
第5類



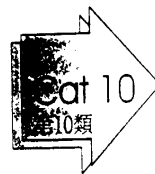
**Class 4.1**  
第4.1類



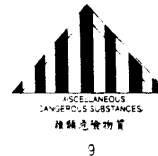
**Class 4.2**  
第4.2類



As specified  
按指定



**Class 9**  
第9類



**Subsidiary labels 次要標籤**

Subsidiary risk labels are similar to the above labels, but they should not bear the class number in the bottom corner. For example:

次要危險標籤類似上述標籤，但不會在底部角落註明類別編號，例如：



**”Limited Quantity” for Dis-application of  
Labelling and Packaging Requirements**

Class (1)	Packaging group (2)	State (3)	Maximum quantity per inner packaging (4)
2	-	Gas	#120 ml (in metal or plastics packaging)
2	-	Gas	120 ml (in glass packaging)
3	II	Liquid	1 l (in metal packaging); or 500 ml (in glass or plastics packaging)
3	III	Liquid	5 l
4.1	II	Solid	500 g
4.1	III	Solid	3 kg
4.3	II	Liquid or solid	500 g
4.3	III	Liquid or solid	1 kg
5.1	II	Liquid or solid	500 g
5.1	III	Liquid or solid	1 kg
*5.2	II	Solid	100g
*5.2	II	Liquid	25 ml
@5.2	II	Solid	500 g
@5.2	II	Liquid	125 ml
6.1	II	Solid	500 g
6.1	II	Liquid	100 ml
6.1	III	Solid	3 kg
6.1	III	Liquid	1 l
8	II	Solid	1 kg
8	II	Liquid	^^500 ml
8	III	Solid	2 kg
8	III	Liquid	1 l

- Remarks:-**
- (i) # This limit may be increased to 1.000 ml for aerosols not containing toxic substance(s).
- \* Only apply to organic peroxide of type B or C and not require temperature control.
- @ Only apply to organic peroxide of type D, E or F and not require temperature control.
- ^^ Glass, porcelain or stoneware inner packaging should be enclosed in a compatible and rigid intermediate packaging.
- (ii) The above “Limited Quantity” shall not apply to:-
- dangerous goods in Class 1, 6.2, 7 and 9;
  - dangerous goods in Packaging Group I;
  - compressed gases in Class 2 (other than an aerosol) which exhibit a flammable, corrosive, oxidizing or toxic risk; and
  - self-reactive substances and desensitized explosives in Class 4.1.



**Proposed Aggregate Limits Governing the  
Storage and Conveyance on land of Dangerous Goods**

Class  (1)	Buildings/Premises for which Aggregate Limits for Storage of Dangerous Goods Shall Apply	
	Non-industrial Buildings/Premises (2)	Industrial Buildings/Premises (3)
Class 2  <i>[Category 2]</i>	300 litres water capacity  <i>[5 cylinders]</i>	450 litres water capacity  <i>[5 cylinders]</i>
Classes 3.1 to 3.3 <i>[Category 5, Class 1 &amp; Class 2]</i>  <i>Paint, Enamels, Lacquers, etc.</i>  Class 3.4 (diesel, etc.) <i>[Category 5, Class 3]</i>	100 litres <i>[Class 1 : 40 litres Class 2 : 40 litres]</i>  250 litres <i>[250 litres]</i>  2,500 litres <i>[2,500 Litres]</i>	150 litres <i>[Class 1 : 120 litres Class 2 : 120 litres]</i>  250 litres <i>[250 litres]</i>  2,500 litres <i>[2,500 litres]</i>
Classes 4 to 9 <i>[Category 3, 4, 6, 7, 8, 9 &amp; 10]</i>	100 litres/kg <i>[no aggregate limit]</i>	1,000 litres/kg <i>[no aggregate limit]</i>

- Remarks**
- (i) The aggregate limits set out in brackets are currently stipulated under the Dangerous Goods (General) Regulations.
  - (ii) It is proposed that the aggregate limits for conveyance of dangerous goods should follow the aggregate limits for the storage of different types of dangerous goods in non-industrial buildings/premises (i.e. column 2).