

PROPOSED AMENDMENTS TO
THE DANGEROUS GOODS
(GENERAL) REGULATIONS
(CAP. 295B)
AND
THE DANGEROUS GOODS
(APPLICATION AND
EXEMPTION) REGULATION
2012
(CAP. 295E)
CONSULTATION DOCUMENT



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Fire Services Department

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1. Purpose

1.1 This Consultation Paper seeks comments on the proposed amendments to the Dangerous Goods (General) Regulations (DG(G)R) and the Dangerous Goods (Application and Exemption) Regulation 2012 (DG(A&E)R 2012) under the purview of Fire Services Department (FSD) with a view to bringing the local regulatory regime on dangerous goods (DG) in line with the international standards, such as the International Maritime Dangerous Goods (IMDG) Code, to facilitating the trade and the public as well as to enhancing the safety standard of regulatory control of dangerous goods in Hong Kong.

2. Background

2.1 The Dangerous Goods Ordinance (DGO) (Cap. 295), and its four subsidiary regulations, namely the Dangerous Goods (Application and Exemption) Regulations (Cap. 295A), Dangerous Goods (General) Regulations (Cap. 295B), Dangerous Goods (Shipping) Regulations (Cap. 295C) and Dangerous Goods (Government Explosives Depots) Regulations (Cap. 295D), provide for the control on land and at sea of about 1,100 types of dangerous goods (DG) under 10 categories in accordance with their inherent characteristics (e.g. explosive, flammable, corrosive, toxic, etc.). Over the years, international codes on the transportation of DG have been published, based on the system developed by an expert committee under the United Nations (UN) Economic and Social Council. Our major trading partners such as the mainland China, the United States, the European Union and Australia have gradually aligned their national rules on DG with the UN system.

2.2 Since the enactment of DGO in 1956, unique labelling and packing requirements have been established for conveyance and storage of DG in Hong Kong. As a result, when DG are imported into, exported or re-exported from Hong Kong, they are often required to comply with two distinct sets of labelling and packing requirements, one under international standards and the other one under the DGO. There is a need to bring the local regulatory regime in line with the commonly adopted international standards.

2.3 The FSD, the then Civil Engineering Department and the Marine Department (MD)¹ started a comprehensive review of the Ordinance in 1995 with a view to aligning it with international standards. As most DG are imported and exported by sea, the Departments agreed that the local control system should follow the International Maritime Dangerous Goods (IMDG) Code as far as possible. The Code, which will be updated every two years, is published by the International Maritime Organization based on the UN system and specifically provides for recommendations in respect of control on sea carriage of DG. Furthermore, the Departments recommended that the list of DG under DGO should be expanded with reference to the IMDG Code, and modified to suit the local context.

2.4 The Dangerous Goods (Amendment) Bill 2000 (Amendment Bill) was introduced into the Legislative Council (LegCo) in October 2000 and contained specific provisions in the following aspects:-

¹ FSD is the regulatory authority for all categories of DG on land, except LPG and relevant gases under Cap.51, which is controlled by the Electrical and Mechanical Services Department, and Category 1 (explosives), which is regulated by the then Civil Engineering Department (now Civil Engineering and Development Department). MD is the regulatory authority for DG at sea and cargo terminals.

- (a) strengthening the penalties for offences under DGO to preserve the deterrent effect eroded by inflation over time;
- (b) empowering FSD and MD to issue codes of practice to promulgate detailed guidelines and safety practices to be followed by the trade in the handling of DG;
- (c) empowering provisions which would form the basis of further amendments to the subsidiary legislation for other proposals, for instance:-
 - (i) aligning the classification (from the existing 10 “Categories” to 9 “Classes” under the IMDG Code), packaging, labelling and other requirements concerning DG with international standards;
 - (ii) strengthening the regulatory regime on the conveyance of DG; and
 - (iii) updating the exempt quantities of DG to cater for changes in local circumstances.

The Amendment Bill was passed by LegCo in March 2002 but has yet to commence operation, pending detailed controls to be set out by way of amendment regulations under DGO.

2.5 In 2012, two amendment regulations, namely the Dangerous Goods (Application and Exemption) Regulation 2012 (Cap. 295E) and the Dangerous Goods (Shipping) Regulation 2012 (Cap. 295F), were introduced into and passed by LegCo. The two regulations have yet to commence operation subject to the amendments to the DG(G)R.

2.6 With a view to bringing the new IMDG classification system into effect as soon as possible, we have recently reviewed all the elements originally proposed in the legislative amendment exercise and intend to first proceed with those legislative amendments that are essential to the implementation of the new IMDG classification system and some technical amendments to update relevant legal provisions to facilitate business operation. We aim at bringing the new IMDG classification system into effect in 2019 at the earliest.

3. The Proposed Legislative Amendments

The extant DG(G)R is proposed to be repealed and replaced by a new legislation. Amendments will also be introduced to the DG(A&E)R 2012. The main features of the proposals are set out below.

3.1 Retention of provisions under the extant DG(G)R

The following components of the extant control regime which have been proven to be effective will be retained in the new regulation:-

Licensing and Approval Regime

3.1.1 The licensing regime of manufacture, storage and conveyance of DG in the extant DG(G)R as well as the application procedures for DG licences will be retained. Applicants will be required to fully comply with the fire safety requirements issued by the Authority (hereinafter the “Authority”

refers to the Director of Fire Services) before a licence will be granted or renewed.

3.1.2 The conveyance of Cat. 3, 4, 6 to 10 DG (i.e. Class 4 to 9 DG under Cap. 295E) will continue to be exempted from licensing requirements. Some restrictions and safety precautions stipulated in the extant DG(G)R, such as the requirement of display of warning signs on DG vehicles, the requirement that DG vehicles must be attended at all times, the prohibition on smoking in DG stores, DG vehicles, etc and the requirement of DG tanks to be certified free from flammable vapour before repair, will be retained.

3.1.3 The existing approval mechanism for Cat. 2 DG cylinders and tanks by the Authority is to be retained. The existing requirements on testing and examination of cylinders by approved persons will be maintained but the details of technical specifications, for examples the filling ratio, working pressure, testing method and etc will be stipulated in the code of practice to keep it up-to-date with technological advancement.

3.1.4 Apart from the licensing mechanism, the existing approval mechanism for storage tanks of Cat. 5 Class 3 DG (i.e. Class 3A DG under Cap. 295E) with capacity not exceeding the exempt quantity will also be retained.

Other Controls and Miscellaneous Provisions

3.1.5 The extant regulatory regime of Cat. 9A DG (i.e. Class 9A under Cap. 295E), which has been operating smoothly for years, is to be retained with minor updates to the list of Class 9A DG by making reference to the latest IMDG Code. (Please refer to the updated list of Class 9A DG at **Appendix I** for details)

3.1.6 The extant regulatory regime of DG stored in approved freight container terminals and air cargo terminal under the extant DG(G)R will be retained.

3.2 Modification of provisions under the extant DG(G)R

The structure of the extant DG(G)R will be streamlined and some provisions covering all classes of DG would be standardised in the new regulation. Details are as follows:-

Restrictions and Safety Precautions

3.2.1 Mixed storage of different classes of DG is prohibited under the extant DG(G)R and this will be retained in the new regulation. DG of the same class stored together shall be allowed only if they are compatible with each other. In other words, DG which are incompatible with each other for storage, e.g. result in dangerous chemical reaction, will be prohibited.

- 3.2.2 Under the extant DG(G)R, different restrictions and safety precautions apply to DG stores containing different category of DG. For example, use of naked flame is prohibited in DG stores for some categories of DG only. It is proposed to standardise the restrictions and safety precautions on DG stores for all classes of DG. For some special restrictions, for instance, the requirements of installing spark-proof electrical equipment and certifying tanks to be free from flammable vapour before repair, will apply to DG of flammable nature.
- 3.2.3 For the sake of public safety, the restrictions and safety precautions mentioned in para. 3.2.2 will apply to fuel tanks approved for the storage of Class 3A DG (diesel oil, furnace oils and other fuel oils) where licences are not required.
- 3.2.4 The extant power of the Authority to prohibit the use of a defective tank for storage of Cat.5 DG (i.e. Class 3 & 3A DG under Cap. 295E) by serving a notice in writing to the licensee / owner will be extended to cover all classes of DG stores and DG vehicles which are considered no longer suitable for storage or conveyance of such DG.
- 3.2.5 The prohibition of unauthorised alteration or addition to DG stores under the extant DG(G)R will be extended to cover all DG vehicles.
- 3.2.6 All DG vehicles will be prohibited from directly fueling any vehicles and transferring DG to a DG tank vehicle.

Licensee required to furnish the authority with information

3.2.7 The existing requirement for the licensee of Cat. 5 DG store to furnish the Authority with the nature and quantity of DG contained in the store will be extended to cover DG stores of all classes and to DG vehicles in order to ensure public safety.

Penalties

3.2.8 The penalty of imprisonment will remain unchanged but the fine as stipulated in the extant DG(G)R will be updated with reference to Schedule 8 of the Criminal Procedure Ordinance (Cap. 221) as follows:-

	<u>Current Fines</u>	<u>Proposed Fines</u>
(a)	\$1,000	Level 2 (currently at \$5,000)
(b)	\$2,000	Level 3 (currently at \$10,000)
(c)	\$5,000	Level 4 (currently at \$25,000)
(d)	\$10,000	Level 5 (currently at \$50,000)
(e)	\$25,000	Level 6 (currently at \$100,000)

3.3 New components to be introduced in the new regulation

New provisions will be introduced in the following areas:-

DG Licences

3.3.1 To enhance the licensing control over the manufacture, storage or conveyance of DG, it is proposed to clearly specify the particulars to be contained in the licence for manufacture, storage and conveyance of DG and to explicitly state the circumstances where the licence will become invalid.

DG Vehicles

3.3.2 Currently, a DG vehicle identification disc is issued together with a DG vehicle licence. It is proposed to specify the particulars contained in the identification disc, and to require the display of the vehicle identification disc on the windscreen of all licensed DG vehicles or at a conspicuous position of the vehicle if the vehicle has no windscreen. In case the licence of any DG vehicle has been revoked or invalidated, display of the vehicle identification disc on such vehicle will be an offence in the new regulation.

3.3.3 In order to ensure that the accuracy of personal and vehicle particulars, it is proposed to introduce new provisions requiring the licensee of DG vehicles to notify the Authority within a specified period upon any changes of

personal and vehicle particulars, such as the name, address and contact number of the licensee, and change of ownership of a DG vehicle.

- 3.3.4 For the purpose of ascertaining the continuous compliance of fire safety requirements of a DG vehicle, the Authority will be empowered to require the licensee of a licensed vehicle to produce the vehicle for examination at a reasonable time and place upon request by the Authority if the Authority reasonably suspects that the concerned vehicle is not safe for the conveyance of DG.

Packing, Marking and Labelling (PML) Requirements

- 3.3.5 The extant PML requirements stipulated in the extant DG(G)R will be replaced by the following:-

- (a) Packaging for DG shall be designed and constructed of material suitable for storing the DG, and provided with adequate measure(s) to prevent any leakage or spillage of any contents. Packaging shall also be maintained in good condition and free from any defect which may impair its performance. All restrictions and technical requirements in the extant DG(G)R will be repealed and incorporated into a code of practice issued by the Authority.
- (b) In order to align the local requirements with the IMDG code, new marking and labelling requirements will be introduced. In gist, the “UN number” and the “Proper shipping name or technical name” of the DG shall be clearly marked on the outermost packaging. The appropriate label(s) shall also be clearly displayed on the same packaging.

- (c) If the DG are packed, marked and labelled in accordance with the IMDG Code, except otherwise specified, the DG will be deemed as having complied with the PML requirements of the new regulation.
- (d) The concept of “limited quantity”, a concept adopted from the IMDG code, will be introduced to all DG. The package of DG with size not exceeding the “limited quantity” will be exempted from the marking and labelling requirements. For example, if a DG is given a “limited quantity” of “1 litre”, DG with package size not exceeding 1 litre will be exempted from all marking and labelling requirements.
- (e) Accurate marking and labelling of DG can give early warning to the public and is therefore of paramount importance to the safe storage, conveyance and use of DG. To this end, the new regulation will include provisions requiring all DG to be packed, marked and labelled accurately.

Codes of Practice (CoP)

3.3.6 The FSD will issue CoP to provide practical guidelines to facilitate the local trade and public to comply with the legislation. Guidelines in respect of the classification of Class 2 to 9A DG will be provided. Apart from this, detailed requirements of packing, marking and labelling DG will also be included in the CoP.

Transitional Provisions

3.3.7 For the purpose of ensuring a smooth transition from the extant DG(G)R to the new regulation, the following transitional arrangements are proposed:-

- (a) A grace period of 24 months will be given after the operation of the new DGO for the public to adapt to the new legislation. Such grace period shall apply to the following:-
 - (i) all licences granted under the extant DGO or DG(G)R;
 - (ii) all person approved by the Authority under the extant DG(G)R;
 - (iii) packing (except those mentioned in (b) below), marking and labelling requirements of DG of the extant DG(G)R; and
 - (iv) the licensing control of newly added DG in DG(A&E)R 2012 which are not DG in the extant legislation.
- (b) It is proposed that all gas cylinders and tanks, as well as Cat. 5 Class 3 DG fuel tanks, approved under the extant DG(G)R shall be deemed to have complied with the new regulation.
- (c) All tests and examinations for the approved cylinders conducted in accordance with the extant DG(G)R before the operation of the new DGO are considered as valid tests and examinations under the new regulation.
- (d) In respect of Cat. 9A DG, the directions issued by the Authority under the extant DG(G)R will continue to be in force.

3.4 Amendments to the DG(A&E)R 2012

The following amendments will be introduced to DG(A&E)R 2012:-

Reviewing of exemption

3.4.1 The exempt quantity (EQ) for Class 2 DG under DG(A&E)R 2012 is based on the water capacity (i.e. size) and number of cylinders containing the DG. Upon review, it is proposed that only the water capacity of cylinders will be counted, and the number of cylinders will no longer be considered when determining the EQ.

3.4.2 In accordance with the IMDG Code, many substances are classified as DG. However, not all of these DG on land are regulated under the DGO since there are other legislation in Hong Kong regulating the safety and usage, etc. of such substances. For the avoidance of doubt, it is proposed to clearly indicate the types of DG on land that are not subject to the regulatory control of the DGO with the examples as follows:-

- (a) medicines;
- (b) chemical wastes;
- (c) clinical wastes;
- (d) liquefied petroleum gas;
- (e) fire extinguishers;
- (f) DG in the form of machinery;
- (g) DG contained in machinery (except anhydrous ammonia contained inside refrigerating system), equipment or foodstuffs (except aerosol);

- (h) alcoholic beverages with 35% or less alcohol by volume;
- (i) gases contained in inflated pneumatic tyres; and
- (j) gases contained in balls intended for use in sports.

Updating of DG lists

3.4.3 The lists of Classes 2 - 9 DG will be updated as follows:-

- (a) To update the DG list in accordance with the latest IMDG Code;
- (b) To remove the substances which are not subject to the regulatory control of DGO from the DG list;
- (c) To introduce the concept of “Limited Quantity” in the DG list which is adopted from the IMDG Code;
- (d) To introduce the concept of “Packing Group” (PG) which is one of the fundamental elements in DG classification in the IMDG Code and shows the level of hazard of the DG. The PG and corresponding level of hazard are as follows:-
 - ✧ Packing Group I: Substances presenting high danger
 - ✧ Packing Group II: Substances presenting medium danger
 - ✧ Packing Group III: Substances presenting low danger
- (e) The exempt quantities of DG will be revised according to their classes and packing groups as follows:-
 - (i) For Class 2 DG:-

	Class 2.1	Class 2.2	Class 2.3
General EQ	75	150	0
Industrial EQ	150	300	0

(ii) For Class 3 DG:–

	PG I	PG II	PG III
General EQ	25	25	25
Industrial EQ	50	150	150

(iii) For Class 4, 5 and 6.1 DG:–

	PG I	PG II	PG III
General EQ	0	10	25
Industrial EQ	0	20	50

(iv) For Class 8 and 9 DG:–

	PG I	PG II	PG III
General EQ	0	25	50
Industrial EQ	0	50	150

(v) The general and industrial EQ of some DG may vary from the table above. After considering the risk presented by the DG and genuine need of the trade and public, the EQ of about 20 DG will be relaxed, for example, the special Class 5.1, 6.1 and 8 DG².

² Section 17 of Cap. 295E:–

special Class 5.1 dangerous goods means Class 5.1 dangerous goods numbered UN 1748, UN2208 and UN 2880 (it is proposed to add UN 3212, UN 3485, UN 3486 and UN 3487 to the special Class 5.1 DG);

special Class 6.1 dangerous goods means Class 6.1 dangerous goods numbered UN 1671, UN 2022, UN 2076, UN 2312, UN 2821 and UN 3455;

special Class 8 dangerous goods means Class 8 dangerous goods numbered UN 1791 and UN 2693.

3.4.4 To update the list of DG in consumer packs (DGCP) having regard to trade facilitation and public safety –

- (a) Certain types of DG commonly used by the general public (e.g. ethyl alcohol) and in the form of consumer packs will be exempted from the licensing requirements if they do not exceed the consumer pack exempt quantity and the aggregate quantity specified in the DG(A&E)R 2012. Consumer packs are small packages in sizes which do not exceed the “Maximum Package Size” (MPS) of the respective DG. The MPS of some DG in the DG list will be revised; and
- (b) After considering the fire risk imposed by DGCP, the MPS of most DGCP will be limited to a maximum of 1 kg or litre, with the exception of bleach of packing group III, which is 5 kg or litres.

3.4.5 The list of Class 9A DG and Prohibited goods will be updated. The updated lists are provided at **Appendices I & II** respectively.

Other amendments

3.4.6 The existing approval mechanism for Class 3A fuel tanks with capacity not exceeding 2,500 litres will be extended to cover tanks installed in industrial premises and used as fuel for the business operation of the concerned premises.

3.4.7 The quantities of liquid or gases may be expressed in terms of litre(L) or kilogram(kg). To facilitate calculation, 1kg shall be deemed as the equivalent of 1L.

4. Share Your View

4.1 We welcome your view on the proposed amendments to the Regulations as set out in details in Paragraph 3.

4.2 Please send your comments to the Fire Services Department by mail, fax or email on or before 30.11.2017:-

Mail: DGO Review Team, Policy Division,
Licensing and Certification Command,
5/F, Fire Services Headquarters Building,
1 Hong Chong Road, Tsim Sha Tsui East.

Fax: 2723 2197

Email: dgoreview@hkfsd.gov.hk

4.3 Members of the public are free to provide their personal data when giving views on the consultation document. Any personal data provided with a submission will only be used for purpose of this consultation exercise.

4.4 The submissions and personal data collected may be transferred to the relevant Government Bureaus, Departments or agencies for purposes directly related to this consultation exercise. The parties receiving the data are bound by such purposes in their subsequent use of the data.

4.5 The names and views of individuals and organizations submitting their views in response to the consultation document (senders) may be published for public viewing after conclusion of the consultation exercise. FSD may, either in discussion with others or in any subsequent report, whether privately or publicly, quote the senders and the views they submitted in response to the consultation document. We will respect the wish of senders to remain anonymous and / or keep the views confidential in part or in whole, but if no such wish is indicated, it will be assumed that the sender can be named and his / her views be published for public information.

4.6 Any sender providing personal data to FSD in his submission will have the right of access and correction with respect to such personal data. Any request for data access or correction of personal data should be made in writing to the contact specified in paragraph 4.2 above.

5. Enquiry

Should you require further information or amplification, please feel free to contact the Dangerous Goods Ordinance Review Team at 2733 7590, 2733 7748 or 2733 7697.

Fire Services Department

September 2017

List of Class 9A Dangerous Goods

1. Cotton Waste, which does not include UN 1364 COTTON WASTE, OILY
2. Cotton (raw), which does not include UN1365 COTTON, WET
3. Kapok, which does not include UN 1372 FIBRES, ANIMAL or FIBRES
VEGETABLE burnt, wet or damp
4. Polymethylmethacrylate (raw material)
5. Polypropylene (raw material)
6. Polystyrene (raw material)
7. Polytetrafluoroethylene
8. Polythene (raw material)
9. Polyvinyl Chloride (raw material)
10. Rubber (raw), which does not include UN 1345 RUBBER SCRAP or RUBBER
SHODDY and UN 1287 RUBBER SOLUTION
11. Rubber tyres for motor vehicles and aircrafts

List of Prohibited Goods

1. Ammonium Chlorate and its aqueous solutions and mixtures of a chlorate with an ammonium salt
2. Ammonium Nitrate liable to self-heating sufficient to initiate a decomposition
3. Ammonium Permanganate and its aqueous solutions and mixtures of a permanganate with an ammonium salt
4. Calcium Azide, except in aqueous solutions not exceeding 20% of Calcium Azide, by mass
5. Chloric Acid aqueous solutions with a concentration exceeding 10%
6. Hydrazine Nitrate
7. Hydrazine Perchlorate
8. Hydrocyanic Acid with more than 20% acid, by mass
9. Hydrogen Cyanide, solution in alcohol with more than 45% Hydrogen Cyanide
10. Manufactured fireworks which explode on impact
11. Perchloric Acid with more than 72% acid, by mass
12. Vinyl Chloride Monomer, which does not include UN 1086 VINYL CHLORIDE, STABILIZED
13. Ammonium bromate and its aqueous solutions and mixtures of a bromate with an ammonium salt
14. Ammonium chlorite and its aqueous solutions and mixtures of a chlorite with an ammonium salt
15. Ammonium nitrites and mixtures of an inorganic nitrite with an ammonium salt
16. Mixtures of a hypochlorite with an ammonium salt