

Guidance Note On Licensing and Operation of Mode B Stores



Mines Division
Civil Engineering and Development Department

1. Introduction

1.1 Under the Dangerous Goods (General) Regulation 10, a Mode B store may store safety cartridges and cartridges for small arms not exceeding 20,000 rounds or manufactured fireworks (pyrotechnics and life saving devices such as marine distress signals) not exceeding in the aggregate 200 kg. Storage of some explosives is exempted from this requirement, including:

- storage of safety cartridges for industrial fastening tools not exceeding 5,000 rounds or 5 kg of explosive content (whichever is the less), and
- storage of safety cartridges and cartridges for small arms not exceeding 1,000 rounds if such storage has already been licensed under the Firearms and Ammunition Ordinance, Chapter 238.

1.2 The Commissioner of Mines (CoM) grants the Mode B store licence.

2. Application for a New Store Licence

2.1 Application for a Mode B store licence will not be processed unless the explosives products to be stored have been approved for use in Hong Kong. The applicant can obtain information concerning the approval of new explosives for use in Hong Kong from the Mines Division Guidance Note entitled 'Approval of Non-blasting Explosives for Use in Hong Kong' which can be viewed and downloaded from http://www.cedd.gov.hk/eng/services/mines_quarries/doc/non_blasting.pdf.

2.2 To apply for a Mode B store licence, an applicant should submit the following information to CoM for consideration:

- (a) A covering letter stating the reasons for acquiring the storage licence and enclosing a duly completed Application Form for a Licence to Store Category 1 Dangerous Goods (Ammunition/Marine Pyrotechnics) - Form No. Min/af/f1, which can be downloaded from <http://www.cedd.gov.hk/eng/forms/doc/sdg.pdf>.
- (b) A full description of each type of explosive product, the maximum quantity to be stored and supporting documents that they have been approved by CoM for use in Hong Kong,
- (c) Six copies of a key plan, drawn to a scale of 1:500, showing the location of the proposed store.
- (d) Two copies of a floor/site plan, drawn to the scale of 1:100, clearly indicating the proposed store and other structures, properties and utilities in the vicinity. If the proposed store is located in a multi-storey building, plans for the floors above and below are also required.

2.3 Some guidelines on the requirements and construction of a Mode B store for processing an application for a Mode B store licence are given in Annex 1.

2.4 After the submitted documents are found to be adequate and in order, CoM will visit the site to determine the necessary pre-licensing requirements. When the applicant has complied with the pre-licensing requirements, CoM will inspect the site again and a Mode B store licence will then be granted within three (3) working days after all the pre-licensing requirements are met.

3. Granting of a New Store Licence

3.1 If CoM is satisfied that the Mode B store licence can be issued, the applicant will be notified of:

- (a) the acceptance of the application,
- (b) the licence conditions imposed,
- (c) the requirement for nominating a store manager and storekeepers together with their HKID Nos. and a recent photograph of each of them, and
- (d) the necessary licence fee.

- 3.2 CoM will inform the nominated store manager and storekeepers to attend an interview to ensure that:
- (a) they have basic knowledge on the safety of their explosives,
 - (b) they are capable of undertaking their responsibilities and familiar with the general operating procedures of their store,
 - (c) they are aware of and understand the licence conditions and legal requirements relevant to the Mode B store, and
 - (d) they acknowledge in writing their responsibilities and the operating procedures related to the Mode B store as given in Annex 2 and Annex 3.
- 3.3 Upon payment of the licence fee, the original copy of the store licence and the stock book will be issued to the licensee's authorized representative who can be the store manager or the storekeeper.

4. Renewal of a Store Licence

- 4.1 A Mode B store licence is normally issued for a period of one year and has to be renewed accordingly. The licensee should apply in writing for the renewal of the Mode B store licence to CoM at least one month before the expiry date. The licensee has to submit the following information for consideration:
- (a) Six copies of a key plan, drawn to a scale of 1:500 to show the location of the existing store.
 - (b) Two copies of a floor/site plan, drawn to the scale of 1:100, clearly indicating the existing store and other structures, properties and utilities in the vicinity.
 - (c) A statement on any changes in development, land or property usage and utilities in the vicinity.
- 4.2 If the renewal of a store licence involves an amendment or update of the explosives items in the licence conditions or a change in store manager or storekeepers, the licensee will be required to submit such additional information.
- 4.3 After vetting the submitted information and carrying out any necessary site checks, CoM will notify the licensee and grant the renewed store licence in a similar manner as the granting of a new store licence given in Para. 3.

5. Amendment of a Store Licence

- 5.1 The licensee should apply in writing to CoM for the amendment of a Mode B store licence at least one month before the planned change. The licensee is required to give valid reasons to demonstrate that there is a genuine need for the proposed amendment to the application.
- 5.2 In case that the application for amendment is for the relocation of an existing Mode B store, the licensee has to submit the same information as listed in Para. 4.1.
- 5.3 After vetting the submitted information and carrying out site checks if necessary, CoM will notify the licensee if the proposed amendment can be approved.
- 5.4 If necessary, the store manager and storekeepers will be informed to attend an interview with CoM:
- (a) to ensure they understand the amended licence conditions, and
 - (b) to refresh and update them on their responsibilities and operating procedures in the relocated store.

5.5 Upon payment of the licence amendment fee, the amended licence and the stock book will be issued to the licensee's authorized representative who can be the store manager or the storekeeper.

6. Cancellation of a Store Licence

6.1 When a licensee has no intention to renew the Mode B store licence or wants to cancel a licence before expiry, the licensee must inform CoM accordingly and propose measures to be taken for the disposal or transfer of any remaining stocks. If the proposal is unacceptable, CoM shall ask the licensee for an alternative arrangement. If the licensee cannot identify any acceptable proposal, CoM shall organise the disposal of the stock.

6.2 CoM will instruct the licensee to return the licence and the stock book, and arrange for an officer to carry out a final inspection to the Mode B store to ensure that:

- the disposal of the stock has been undertaken properly and legally, and
- the licensee has removed or covered up by painting all the danger signs, and warning wording on the store or has dismantled the store.

6.3 CoM will organize to cancel the Mode B store licence if he is satisfied with the arrangements made by the licensee.

7. Inspection of a Licensed Store

7.1 When a store licence has been approved, renewed or amended, CoM will arrange inspections for the Mode B store. For general guidance:

- (a) The inspection frequency will be at least two (2) times per year, and
- (b) all stores will be inspected within one month before the renewal of the store licence.

7.2 CoM may carry out a surprise check or make prior arrangement with the store manager of the licensee for an inspection of the store. During the inspections, an officer of the Mines Division will conduct an audit covering the following:

- (a) the presence of an approved storekeeper,
- (b) the suitability of the store for the storage of Category 1 Dangerous Goods,
- (c) the records of stock movements,
- (d) the explosives safety aspects of the store including the presence of any undesirable installations such as power supply, electrical appliances, sources of naked flame or heat in the near vicinity of the store,
- (e) the fire safety aspects of the store such as the presence of any inflammable materials in the near vicinity of the store or blockage of fire escape routes, and
- (f) any contravention of licence conditions or the Dangerous Goods Ordinance.

7.3 If any non-compliance, irregularity or contravention is found during a Mode B store inspection, CoM will take appropriate actions for rectification. An officer of the Mines Division will re-inspect the Mode B store at an appropriate time to ensure the non-compliance, irregularity or contravention has been rectified.

7.4 In case of repeated non-compliances or irregularities, or any serious contravention of the licence conditions or the Dangerous Goods Ordinance, CoM will consider:

- revocation of the Mode B store licence, and/or
- legal action against the licensee.

8. Recommended Good Practice

- 8.1 The licensee and his/her nominated staff have a continuing responsibility for the safety of the general public and staff. To this end, the nominated store manager and storekeepers must take sufficient measures to safeguard the explosives safety and security to ensure compliance with the licence conditions and the Dangerous Goods Ordinance.
- 8.2 A set of store rules should be compiled highlighting the key issues given in the licence conditions, the Dangerous Goods Ordinance and any other essential procedures in handling the explosives in the Mode B store. The store rules should cover the following areas:
- (a) The permitted use and licensed quantities of the store.
 - (b) The explosives storage requirements.
 - (c) The fire safety precautions.
 - (d) The procedures in the issue and receipt of stock.
 - (e) The maintenance requirements of the Mode B store.
- 8.3 The set of store rules should be posted in a conspicuous place on or near the store. All staff members of the licensee should comply with the store rules at all times.
- 8.4 The store manager should identify the key issues and compile a specific set of store rules accordingly to address the operational needs for his/her Mode B store. He/She should provide adequate briefing to the storekeepers and other staff members to ensure they understand the requirements in operating the Mode B store. An example of a set of store rules is attached in Annex 4.

Mines Division
May 2009

General guidance is provided in this Note. Additional requirements may be provided by the Commissioner of Mines to suit the store conditions and characteristics of the dangerous goods. Feedback or enquiries on this document can be directed to the Chief Geotechnical Engineer/Mines of the Geotechnical Engineering Office, Civil Engineering and Development Department at 25/F, 410 Kwun Tong Road, Kwun Tong, Kowloon.

Telephone: (852) 2716 8666 Facsimile: (852) 2714 0193 E-mail: mines@cedd.gov.hk

Guidelines on the Requirements and Construction of a Mode B Store

Explosives Safety Distance Requirement

1. The British Health and Safety Executive (HSE) Table of Outside Safety Distance (1995 version) is used to assess the outside safety distance of a proposed Mode B store location to three different classes of adjacent development. Two parameters have been adopted in the HSE Table which are:

- the net explosives quantity (NEQ), and
- the United Nations (UN) Hazard Division (HD) or Hazard Type of the manufactured explosives product which is defined in Chapter 2.0 of International Maritime Dangerous Goods (IMDG) Code, Volume 1, 2002 Edition.

The HSE Table covering possible the range of NEQ for a Mode B Store is given below.

OUTSIDE SAFETY DISTANCES (METRES)						
NEQ	Outside Buildings and Works of Class 1			Outside Buildings and Works of Class 2		
Kg	“HD 1.4” or Hazard Type 4	“HD 1.3” or Hazard Type 3	“HD 1.1 or 1.2” or Hazard Type 1 or 2	“HD 1.4” or Hazard Type 4	“HD 1.3” or Hazard Type 3	“HD 1.1 or 1.2” or Hazard Type 1 or 2
50	8	12	23	17	23	23
100	9	15	23	19	29	33
150	10	17	23	20	34	43
200	11	19	26	22	37	52

Notes :

- (i) Outside buildings and works of Class 1 shall comprise any railway, aerodrome, canal (in active use) or other navigable water, dock, pier or jetty; market place, public recreation or sports ground or other open place where the public are accustomed to assemble; public highway; private road which is the principal means of access to a church, chapel, college, school, hospital or factory, river wall, sea wall, reservoir.
- (ii) Outside buildings and works of Class 2 shall comprise any dwelling house; retail shop; government and public buildings, church, college, chapel, school, hospital, theatre, cinema or other buildings where the public are accustomed to assemble; motorway; factory; building or works used for the storage in bulk of petroleum spirit, gas, or other inflammable substances; buildings or works used for the storage and manufacture of explosives or of articles which contain explosives.

- (iii) Safety distances for outside buildings and works of Class 3 are twice the distances for Class 2. Outside buildings and works of Class 3 shall comprise any of the buildings and works of Class 2 defined above and which are of vulnerable construction, that is to say:
- (a) buildings of curtain wall construction, of 4-storey or more, that are constructed with external non load-bearing cladding panels on a sub-frame which is supported off the structural frame or floors for the full height of the building, or
 - (b) buildings of largely glass construction which are 4-storey or more in height and are glazed over more than 50% of their wall area, or
 - (c) other large buildings which employ non load-bearing cladding panels.
2. If more than one Mode B store is to be set up in a multi-storied building, the British HSE Table of Inside Safety Distance (1995 version) is normally used. Accordingly, a radial separation distance of 9m is required between any two Mode B stores in the same building.
3. For further details of outside and inside safety distances to different classes of outside buildings and works, applicants can refer to the British HSE Tables of Safety Distances for an explosives magazine to assess the suitability of the proposed store location. These Tables can be found in the Guide to the UK Explosives Act 1875, Appendix K which are based on the Tables set out in the 1951 Store for Explosives Order. Alternatively, applicants can seek advice from CoM in the evaluation of the outside and inside safety distances for their Mode B stores.
4. For an explosives product of a maximum quantity which is considerably less than the minimum weight of 50 kg (NEQ) of explosives given in the British HSE Tables of Safety Distances, the safety distance may be reduced depending on the actual conditions at and around the proposed Mode B store location and the Hazard Type of the explosives product.

Storage Compatibility Requirements

5. Separate licensed stores will be required for incompatible groups of explosives as recommended by the UN classification of explosives.
6. The Dangerous Goods (General) Regulation 26 defines different groups of explosives. The storage of different groups of explosives in the same receptacle shall follow the requirements of this regulation.
7. Any applicant may approach CoM for advice in determining the storage compatibility of his/her explosives.

Construction of a Mode B Store

8. A Mode B store is typically a fireproof container which is:
- (a) painted red with the words “Danger – Explosives” and the Chinese characters “危險 - 爆炸品” of not less than 40mm in height painted in white on the outside surface of the lid or door;
 - (b) capable of being locked; and
 - (c) so constructed that neither inside nor outside is there any exposed ferrous metal.
9. A Mode B store should be kept in a room which is:
- (a) capable of being locked;

- (b) not used as a store for any other category of dangerous goods, and
- (c) equipped with an efficient water/CO2 fire extinguisher at a readily accessible location.

Additional Requirements

- 10. Any application for the storage of ammunition cartridges for small arms will require the endorsement of the Commissioner of Police concerning security and supported with a copy of the arms dealer licence or exemption permit.
- 11. Additional fire fighting requirements may be imposed by the Fire Services Department such as height restrictions in a multi-storey building, ventilation or Category 1 Dangerous Goods warning signs.



土木工程拓展署
Civil Engineering and
Development Department

土力工程處
Geotechnical Engineering Office

Name of store manager: _____
HKID No.: _____
Mobile Phone No.: _____
Store Licence No.: _____
Our Ref: _____

Recent
Photograph

Operation Procedures for a Store Manager of Mode B Stores

Management Responsibilities

1. The licensee of a Mode B store is normally a registered company in Hong Kong. As soon as a Mode B store licence is granted, the licensee should appoint a store manager, who is a staff member at management level to:
 - (a) liaise with CoM on matters related to the Mode B store, and
 - (b) assume the overall management responsibilities of the Mode B store for the licensee.
2. The store manager is recommended to acquire knowledge of the following in order to discharge his/her management responsibilities:
 - (a) The Dangerous Goods (General) Regulations 9 to 27 on Storage of Explosives to ensure the operation of the Mode B store follows the legal requirements,
 - (b) The Dangerous Goods (General) Regulation 60 on Penalties to understand the penalties for contravening the regulations related to the Mode B store,
 - (c) The licence conditions of the Mode B store and the Dangerous Goods Ordinance Section 9B on Penalty for Breach of Licence,
 - (d) The Material Safety Data Sheets (MSDS) for the explosives products to safeguard the safety of his/her staff members and the public, and
 - (e) The Operation Procedures for Storekeepers of a Mode B Store (Annex 3) to check that the storekeepers operate the Mode B store properly.

Operation Procedures

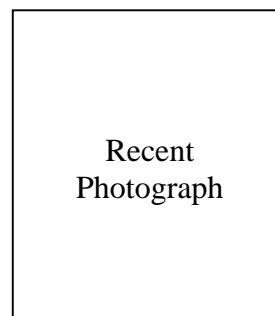
3. The store manager has the responsibilities to ensure the Mode B store licence granted by CoM is valid at all times and to notify CoM on the renewal, amendment or cancellation of the Mode B store licence by giving at least one (1) month written notice.
4. The store manager shall check the work of the storekeepers periodically during operation of the Mode B store to ensure they follow proper procedures.
5. The store manager shall, in company with the storekeeper, check or audit the Mode B store at a frequency of not less than once per month to ensure explosives safety and that the operation of the Mode B store complies with the legal requirements, the licence conditions and in accordance with proper procedures. The records of the check or audit should be kept for the inspection of CoM.



土木工程拓展署
Civil Engineering and
Development Department

土力工程處
Geotechnical Engineering Office

Name of store manager: _____
HKID No.: _____
Mobile Phone No.: _____
Store Licence No.: _____
Our Ref: _____



Operation Procedures for a Storekeeper of Mode B Stores

Responsibilities

1. The licensee of a Mode B store should appoint one or more storekeepers who will be responsible for:
 - the day-to-day operation of the store,
 - updating the stock book immediately after a stock movement, and
 - facilitating the inspection of the Mode B store by an officer of the Mines Division.
2. The storekeeper is recommended to be familiar with the requirements stipulated in these Operation Procedures and to acquire the following basic knowledge:
 - (a) the licence conditions of the Mode B store;
 - (b) the Materials Safety Data Sheets (MSDS) of the explosives products stored in the Mode B store, and
 - (c) the basic legal requirements and penalties related to the operation of a Mode B store.

Storage Requirement

3. Under no circumstances shall the Mode B store keep any unauthorized material other than those approved on the licence. The storekeeper shall ensure that the actual stock balance does not exceed the quantity approved on the licence.
4. The storekeeper shall be conversant with and strictly follow the recommendations given in the Material Safety Data Sheets of the Category1 Dangerous Goods being kept in the Mode B store.
5. The storekeeper shall report to the store manager for action if any Category1 Dangerous Goods under storage:
 - are found missing,
 - exceed the permissible quantity of the Mode B store licence,
 - exhibit any signs of deterioration or damage,
 - are improperly packed, stacked or incorrectly labeled, or
 - exceed the expiry date.

6. The storekeeper shall securely keep the stock book near or in the Mode B store.

Security Requirement

7. The Mode B store must be securely locked at all times and the storekeeper shall keep the key to the store. Only storekeeper/s nominated by the licensee, who have been approved by and registered with CoM, are permitted to open the Mode B store.
8. The storekeeper shall take precautions to prevent any unauthorized person from obtaining access to the Mode B store and report to the store manager immediately in case of such unauthorized entry.

Fire Fighting Requirement

9. Any Category1 Dangerous Goods shall be handled with due care at all times. They shall be kept away from flammable materials and other sources of possible ignition or damage.
10. The storekeeper shall ensure that the room housing the Mode B store is equipped with a serviceable water/CO₂ fire extinguisher at a readily accessible location. He/she shall be knowledgeable in using the fire extinguisher for fighting small fires not involving Category1 Dangerous Goods in the vicinity of the Mode B store.
11. In case of fire involving Category 1 Dangerous Goods in the Mode B store, the storekeeper shall immediately evacuate the store area and cordon off the danger zone. He/she shall immediately inform the Fire Services Department, Police, the store manager and CoM about the incident.

Maintenance Requirement

12. The storekeeper shall not allow any repair work in the Mode B store unless permitted by the store manager and provided only that all Cat.1 Dangerous Goods have been removed and the store has been cleaned.

Receipt and Issue of Stock

13. A valid Removal Permit must be issued to cover the receipt or issue of stock from a Mode B store except when the removal takes place inside the same premises as the Mode B store.
14. Used Removal Permits and their associated documents shall be filed and kept properly for the inspection of CoM when required at any time.
15. The storekeeper shall maintain an up to date record of all transactions of Category1 Dangerous Goods in the stock book provided by CoM. The storekeeper shall initial each transaction to certify that all entries are correct.
16. Before the removal of any quantity of Category1 Dangerous Goods from the Mode B store, the storekeeper shall obtain the agreement of the store manager and shall:
 - ensure that the vehicle to be used is equipped with a serviceable fire extinguisher and displaying a standard red flag, and
 - check that the type of vehicle to be used and its registration number are the same as those specified on the form "Application for Removal Permit(s) to Convey Category 1 Dangerous Goods on Land".

An Example of a Set of Store Rules

1. Permitted Storage

- 1.1 Only stock approved in the licence shall be accepted
- 1.2 Stock shall not exceed the quantity approved in the licence
- 1.3 No unauthorized material shall be permitted for storage

2. Security Requirements

- 2.1 The store must be locked securely when not in use
- 2.2 The store can only be accessed by an authorized storekeeper/store manager

3. Fire Safety Requirements

- 3.1 No smoking is permitted when the store is opened
- 3.2 The fire escape route from the store must be kept clear
- 3.3 The fire extinguisher must be serviceable

4. Storage Requirements

- 4.1 The store must be inspected by the store manager at least once per month
- 4.2 Any stock found lost/deteriorated/expired/damaged must be reported to CoM
- 4.3 Old stock must be used before new stock
- 4.4 The store must be kept clear and free from rubbish and packing materials.
- 4.5 Only one package of the same stock shall be opened at any one time.
- 4.6 Water must be excluded from the store. (Exemption for explosives requiring special treatment)
- 4.7 The stock book must be kept near or in the store.

5. Receipt and Issue of Stock

- 5.1 The storekeeper must check and endorse a valid Removal Permit in each issue of stock and file the Licensee Copy
- 5.2 The stock book must be updated immediately after each transaction

6. Maintenance Requirements

- 6.1 The store must not be moved or relocated.
- 6.2 No repair or maintenance is permitted unless all stocks have first been removed.