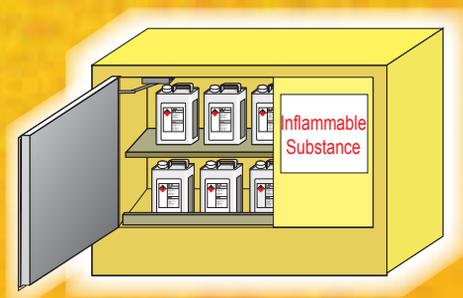


A Guide to the Factories and Industrial Undertakings (Fire Precautions in Notifiable Workplaces) Regulations



This guide is prepared by the Occupational Safety and Health Branch,
Labour Department

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**A Guide to the Factories and
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(Fire Precautions in Notifiable Workplaces)
Regulations**

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1. INTRODUCTION

Fire always costs Hong Kong industries dearly in terms of loss of production time, personal injuries or deaths and damages to properties. The Factories and Industrial Undertakings (Fire Precautions in Notifiable Workplaces) Regulations provide for the prevention of the outbreak of fire, the spread of fire and smoke in case of fire, the provision of fire fighting equipment and the maintenance of fire escapes in notifiable workplaces in Hong Kong.

This guide outlines the main provisions of the regulations and aims to impress on industrial employers and employees the importance of taking adequate fire precautions. Letters in italics immediately following each regulation are intended to impart a better understanding of these regulations and thereby to help the reader in complying with them.

This guide should be read in conjunction with "A Guide to the Factories and Industrial Undertakings Ordinance (Sections 6A & 6B) - Know Your General Duties" which imposes general duties on proprietors and persons employed with regard to the health and safety at work in industrial undertakings.

While every care has been exercised to include important details in this guide, the Factories and Industrial Undertakings (Fire Precautions in Notifiable Workplaces) Regulations remain the sole authority for the provisions of the law explained.

2. REGULATIONS

2.1 Interpretation

Reg.2

'Building Authority' means the Building Authority as defined in section 2(1) of the Buildings Ordinance.

'flammable substance' means any substance specified in Category 5 of the Schedule to the Dangerous Goods (Application and Exemption) Regulations.

2.2 Application

Reg.3

These regulations apply to every notifiable workplace required to be notified to the Commissioner for Labour under the Factories and Industrial Undertakings Ordinance.

2.3 Doors

2.3.1 (a) Every door leading out of a notifiable workplace shall be maintained in such condition that it can be readily opened and closed at all times.

Reg.4(1)(a)

(b) If it is a sliding door, it shall be –

Reg.4(1)(b)

(i) so designed as to be self-closing, by its own weight or otherwise; or

(ii) connected to a counterweight by means of a fusible link which shall fuse at a temperature of not more than 68°C thereby disconnecting the counterweight from the door so that the door will close.

(c) If it is not a sliding door, it shall be kept closed by means of a self-closing device. The device shall be fully operational and maintained in good working order at all times.

Reg.4(1)(c)

(d) If it is made of metal, it shall be of solid steel with an overall thickness of not less than 3 mm.

Reg.4(1)(d)

- (e) If it is made of materials other than metal, it shall –
- (i) conform to the standards laid down in Tables F and G of the Third Schedule to the Building (Construction) Regulations;
 - (ii) be in accordance with the specifications shown in the plan approved by the Building Authority under section 14(1) of the Building Ordinance.

Reg.4(1)(e)

In order to prevent the spread of fire and smoke in case of fire, the doorways leading out of a notifiable workplace should be suitably protected. The doors provided should be kept closed at all times by the installation of self-closing devices. If the door is sliding and normally open, it should be connected to a counterweight by means of a fusible link so that in case of fire, the door will close automatically. The door should be constructed of materials having adequate Fire Resisting Period.

2.3.2 Every door in a notifiable workplace, other than a sliding door, shall be constructed to open outwards and shall not when open reduce the effective width of any means of escape –

Reg.4(2)

- (a) from the workplace, if the door is a door leading out of the workplace; or
- (b) if the door is a door of a room in the workplace being a room in which more than 10 persons are employed, from the room.

With exit doors opening outwards, persons employed inside the workplace or any room of the workplace can escape more speedily in case of fire to a safe place. This is particularly important when the number of persons employed is large. However, when the door is open, it should not reduce the effective width of passageways, corridors, doorways or any other means of escape.

2.3.3 While any person is employed in a notifiable workplace or any room within the workplace, whether such person is working or not, the doors, gates and shutters leading out of such workplace or room shall not be locked or fastened in such a manner that they cannot be easily and immediately opened from the inside. Reg.4(3)

Many lives have been lost in fires because of locked exit doors or because exit doors are fastened in such a manner that they are not easily and immediately opened. Devices are now available in the market which serve the purpose of security and yet are capable of enabling the doors to be easily and immediately opened from the inside.

2.4 Maintenance of fire escapes

2.4.1 The proprietor of every notifiable workplace shall maintain in good condition and free from obstruction every doorway, stairway and passageway within the workplace which affords a means of escape from the workplace in case of fire. Reg.5(1)

All routes of escape such as doorways, passageways and staircases, should be maintained in good condition and free from obstruction in order to facilitate speedy escape of persons from the workplace in case of fire.

2.4.2 It is the legal duty of every person not to wilfully alter, damage, obstruct or otherwise impair any such means of escape, including the doorways, stairways and passageways, of a notifiable workplace. Reg.5(2)

2.5 Fire fighting

- 2.5.1 Even though fire services installation or equipment has already been provided in a notifiable workplace, the Commissioner for Labour may, by notice in writing, require the proprietor to provide additional means for fighting fire appropriate to the size, type and nature of the undertaking being carried on. The additional means for fighting fire shall be maintained in an efficient working order and in good repair and so placed as to be readily available for use. Reg.6(1)

Very often, items for fighting fire, e.g. fire hydrants, fire extinguishers, are provided by the developers or building managements as part of the industrial premises. However, these are intended for general fire fighting purposes. Provision of additional fire fighting equipment, especially portable types, may be necessary to deal with incipient fires from trade processes. The Commissioner for Labour may, by notice in writing, require the proprietor to provide these additional items, maintain them in an efficient working order and in good repair and so placed as to be readily available for use.

- 2.5.2 The notice given under this regulation by the Commissioner for Labour shall specify in detail the means for fighting fire to be provided and maintained, and the time within which the notice is to be complied with. Reg.6(2)

- 2.5.3 The proprietor of a notifiable workplace shall, on being served with a notice by the Commissioner for Labour under this regulation, comply with the notice. Reg.6(3)

- 2.5.4 It is the legal duty of every person not to wilfully alter, damage, obstruct or otherwise impair any means for fighting fire provided. Reg.6(4)

- 2.5.5 In this regulation 'maintain' means maintain in an efficient state, in efficient working order and in good repair. Reg.6(5)

2.6 Smoking

- 2.6.1 An occupational safety officer may, by notice in writing, prohibit smoking in any notifiable workplace, or any part of it, where any inflammable substance or article is present in connection with any industrial process or operation and involves danger of fire, and the circumstances are such that smoking would give rise to a serious fire risk. Reg.7(1)

Industrial processes and operations often involve the use of inflammable substances or other substances or articles which present danger of fire. The introduction of a source of ignition should therefore be strictly prohibited in notifiable workplaces or any part of them in which these processes or operations are carried on. In order to prevent the outbreak of fire, an occupational safety officer is empowered under this regulation to prohibit smoking in these workplaces or any part of them, by notice in writing. For example, smoking will be prohibited in areas where inflammable substances, such as thinners, are used or in cotton mills where large quantity of combustible material is present.

- 2.6.2 It is the legal duty of every person not to smoke in any part of a notifiable workplace in which smoking is prohibited. Reg.7(2)

- 2.6.3 The proprietor of a notifiable workplace in which smoking is prohibited shall take all reasonable steps to ensure compliance with the prohibition and display in prominent positions within the workplace sufficient number of prohibition notices. These notices shall bear the words and characters 'NO SMOKING 不准吸煙' in letters and characters not less than 180 millimetres high. Reg.7(3)

- 2.6.4 All 'NO SMOKING 不准吸煙' notices shall be maintained in good condition by the proprietor. Reg.7(4)

2.7 Alterations and additions

The proprietor of a notifiable workplace shall not carry out or cause or permit to be carried out or suffer the continuance of any alteration or addition to a notifiable workplace as it is shown on the plans of the building approved by the Building Authority under Part II of the Buildings Ordinance that may – Reg.8(1)

- (a) create a serious risk of –
 - (i) the outbreak of fire;
 - (ii) the spread of fire; or
 - (iii) the spread of smoke from any fire; or

- (b) obstruct free passageway to a means of escape from the workplace in case of fire.

Industrial premises are designed and built to specific standards of fire safety. Hence, the proprietor of a notifiable workplace should not carry out alterations or additions to a workplace that may cause a serious risk of the outbreak of fire or other risks in case of fire, or impair any means of escape from the workplace. Any proprietor wishing to carry out any alteration or addition in his workplace is advised to obtain prior approval from the Building Authority. Common examples of such additions or alternations include:–

breakage or removal of the original smoke lobby walls, which will result in case of fire, the spreading of fire and smoke to the staircase and thence to other floors of the building;

bricking up an exit doorway, which will obstruct free passage to a means of escape in case of fire; and,

removal of partition walls between units of a building, which will result in fire and smoke spreading more rapidly from one unit to another in case of fire.

2.8 Storage of inflammable substances

- 2.8.1 If inflammable substances exceeding 35 litres are present in connection with an industrial process or operation, they shall be stored in suitable closed containers and the containers shall be kept in a storeroom approved by the Director of Fire Services. If the aggregate quantity of inflammable substances does not exceed 35 litres, it shall be stored in suitable closed containers kept in a cupboard or bin constructed of suitable material. The cupboard or bin shall be so placed that the inflammable substances are least likely to catch fire. Reg.9(1)

Inflammable substances such as thinners and petrol should be kept in closed metal containers. If the total quantity exceeds 35 litres, they should be stored in a dangerous goods store approved by the Director of Fire Services. If, however, the total quantity does not exceed 35 litres, these containers of thinners or petrol should be stored in a cupboard or bin of steel sheets or other suitable fire-resisting materials. The cupboard or bin should be placed in a position away from any source of heat in order to prevent inflammable substances from catching fire.

- 2.8.2 The words 'Inflammable Substance 易燃物品' shall be clearly and boldly marked on every container, storeroom, cupboard and bin used for storing inflammable substances. But this does not apply to – Reg.9(2)
- (a) any suitable small closed containers containing not more than 500 millilitres of inflammable substance; or
 - (b) any aerosol dispenser in which the amount of inflammable substance contained is not in excess of either 45% by weight of the total contents or 250 grammes in weight.

- 2.8.3 This regulation is in addition to and not in derogation of the Dangerous Goods (General) Regulations. Reg.9(3)

2.9 Sources of ignition

- 2.9.1 Naked flames or other means likely to ignite vapour from any inflammable substances shall not be present in any notifiable workplace where a dangerous concentration of vapours from an inflammable substance may be present. Reg.10(1)

Where there is a high concentration of vapour from an inflammable substance, the presence of an ignition source can create an outbreak of fire. The ignition source may be naked flames, electrical switches, sockets, motors and similar electrical appliances that are liable to give off sparks or become hot and they should, for instance, be installed in a safe area. The electrical wiring inside the room should also be protected in metal conduits.

- 2.9.2 Where a dangerous concentration of vapours from any inflammable substance may be present, cotton wastes and other materials which – Reg.10(2)
- (a) have been used in such a manner as to render them liable to spontaneous combustion; or

(b) are contaminated with any inflammable substance,

shall be deposited as soon as is reasonably practicable in a metal container having a self-closing lid or be removed without delay to a safe place.

Cotton wastes and other similar materials are frequently used for wiping or other purposes in workplaces where inflammable substances are used. They are liable to spontaneous combustion or, if contaminated with inflammable substances, they can easily and speedily be ignited on contact with a source of ignition. If it is not practicable to remove them immediately to a safe place, they should be deposited in a metal container with a self-closing lid which, when released, will automatically close.

2.10 Prevention of escape of vapours

Where inflammable substances are present, steps shall be taken to prevent as far as is reasonably practicable the escape of vapours from the substance into the atmosphere of the workplace.

Reg.11

Small quantities of inflammable substances may be used, for instance, on work benches for hand-painting or gumming work. Vapours given off from the inflammable substances may be built up to dangerous concentrations in the workplace and to prevent this, inflammable substances used on work benches should be contained in non-spillable metal containers with suitable lids.

2.11 Naked flame

Without prejudice to Regulation 10(1), if any naked flame, burner or furnace is used, adequate precautions shall be taken to prevent the accidental ignition of any combustible material.

Reg.12

The use of naked flame, burners and furnaces is necessary in many industrial processes. Since they themselves are sources of ignition, adequate precautions must be taken to prevent their accidental ignition of combustible materials. Rotational moulding, for instance, which involves the use of burners, should be done in a segregated room of fire-resisting materials in order to separate the burners from the rest of the workplace. Combustible waste materials should also be removed regularly from the rotational moulding room to avoid accidental ignition. Diesel-fired boilers, commonly found in industry, should be treated similarly.

2.12 Power to require safety precautions, etc.

2.12.1 The Commissioner for Labour may, by notice in writing –

- (a) require the proprietor of a notifiable workplace to provide such means of escape in case of fire as specified in the notice; Reg.13(1)(a)

- (b) require the proprietor of a notifiable workplace to take such measures as specified in the notice to reduce the outbreak of fire, the spread of fire or the spread of smoke in case of fire; and Reg.13(1)(b)

- (c) require the proprietor of a notifiable workplace to provide illuminated notices bearing the words and characters ' 出EXIT路 ' in letters and characters not less than 180 millimetres high at each exit from the workplace and to have these notices maintained in good condition. Reg.13(1)(c)

This regulation empowers the Commissioner for Labour to require, by notice in writing, the provision of adequate means of escape from a notifiable workplace and the adoption of other measures for protection against fire. He is also empowered to require the provision of illuminated ' 出EXIT路 ' notices which serve to guide people out of a workplace in case of fire.

2.12.2 Every notice given under this regulation shall specify in detail the requirements of the Commissioner, and the time within which the notice is to be complied with. Reg.13(2)

2.12.3 The proprietor of a notifiable workplace shall, on being served with a notice under this regulation, comply with the notice. Reg.13(3)

2.13 Offences and Penalties

- 2.13.1 The proprietor of any notifiable workplace who contravenes Regulation 6(3), 7(3) or 9(1) commits an offence and is liable to a fine of \$50,000. Reg.14(1)
- 2.13.2 Where in respect of any notifiable workplace, Regulation 9(2), 10(1) or (2), 11 or 12 is contravened, the proprietor of the notifiable workplace commits an offence and is liable to a fine of \$50,000. Reg.14(2)
- 2.13.3 Any person who contravenes Regulation 7(2) and any proprietor of a notifiable workplace who contravenes Regulation 7(4) commits an offence and is liable to a fine of \$10,000. Reg.14(3)
- Any person who contravenes Regulation 5(2) or 6(4) commits an offence and is liable to a fine of \$50,000. Reg.14(3A)
- 2.13.4 The proprietor of any notifiable workplace who contravenes Regulation 8(1) commits an offence and is liable to a fine of \$200,000 and to imprisonment for 6 months. Reg.14(4)
- 2.13.5 The proprietor of any notifiable workplace who contravenes Regulation 4, 5(1) or 13(3) without reasonable excuse commits an offence and is liable to a fine of \$200,000 and to imprisonment for 6 months. Reg.14(5)

3. USEFUL INFORMATION

3.1 Enquiries

If you wish to obtain further information about this guide or require advice on occupational safety and health, please contact the Occupational Safety and Health Branch of the Labour Department through:

Telephone: 2559 2297 (auto-recording after office hours)

Fax : 2915 1410

E-mail : enquiry@labour.gov.hk

Information on services offered by the Labour Department and on major labour legislation can also be found by visiting our Homepage at <http://www.labour.gov.hk>.

3.2 Complaints

If you have any complaint about unsafe workplaces and practices, please call the Labour Department's occupational safety and health complaint hotline at 2542 2172. All complaints will be treated in the strictest confidence.

