# 消防處防火總區

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## FIRE SERVICES DEPARTMENT FIRE PROTECTION COMMAND

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5 November 1997

## FSD Circular Letter No. 12/97 Clean Agent Fire Extinguishing System

Subsequent to the newly approved clean agent fire extinguishing system using the trifluoromethane (CHF<sub>3</sub>) in Hong Kong, Part VIII of FSD Circular Letter No. 4/96 is required to be amended with new warning label designed for the new system.

In view of the above, page VIII.5 to VIII.7 and Appendix E of Part VIII of F.S.D. Circular No. 4/96 on the captioned subject have been duly amended and replaced by the attached pages.

Signed (HSU King-ping) for Director of Fire Services 6.2 All premises protected by CO<sub>2</sub>, BCF or BTM fixed installations or sprayer units shall be suitably marked with the appropriate symbol on, or near the entrance door. These symbols are to be of the design, colour and size as shown on the diagram at Appendix A.

#### 7. Halon Modular Systems in Existing Buildings

#### 7.1 Types and Standards

- 7.1.1 Halon 1301 modular system shall be installed in accordance with NFPA Standard 12A
- 7.1.2 Halon 1211 modular system shall be installed in accordance with NFPA Standard 12B.

#### 7.2 Approvals

- 7.2.1 All such systems shall be tested and approved by an organisation recognised by the Fire Services Department. Enquiries concerning these organisations should be made to the Fire Protection Bureau.
- 7.2.2 Any ancillary equipment used shall be of the approved type and accepted by this Department.

#### 7.3 Containers

- 7.3.1 Containers should preferably be located outside protected areas. However, containers may be located within the protected areas when it is possible to do so in a manner that is unlikely to impair system performance when exposed to fire.
- 7.3.2 When containers are located within protected areas or in places where they may not be readily accessible during a fire, provision shall be made for manual control (preferably mechanical) in a readily accessible location outside the protected areas

#### 8. Clean Fire Extinguishing Agents

FM200 (Heptafluoropropane) NAFS-III (HCFC Blend A)

Inergen (Nitrogen, Argon and Carbon Dioxide)

HCFC-123 (Dichlorotrifluoroethane) HCFC-124 (Chlorotetrafluoroethane)

CEA-410 (Perfluorobutane) HFC-23 (Trifluoromethane)

Date: 22 October 1996 (Revised on 5 November 1997) Signed
(HSU King-ping)
for Director of Fire Services

#### 8.1 Portable Hand-Operated Approved Fire Extinguishers for Class 'B' and 'Electric' Fires

Subsequent to dispensing with BCF type portable hand-operated fire extinghisher, the HCFC-123 type portable hand-operated fire extinguisher is acceptable as an alternative to the BCF type fire extinguisher.

## 8.2 <u>Automatically Operated Total Flooding Systems</u>

FM 200, NAFS-III, Inergen, CEA-410 and HFC-23 systems are acceptable for use in automatic systems. Installations design must be in accordance with NFPA Standard 2001 and UL Standard 1058.

#### 8.3 Fixed Sprayer Units (NAFS-III and HCFC-124)

NAFS-III and HCFC-124 automatic type fire extinguishers are acceptable for use for protection of small Category 5 Dangerous Goods Stores, certain types of electrical installations and in certain circumstances as an alternative to automatic CO<sub>2</sub> and BTM installations with volume less than 44.0m<sup>3</sup>.

8.3.1 Calculation of the amount of NAFS-III and HCFC-124 required to protect any particular risk is made on the following basis:-

NAFS-III : 1kg to cover 2.75m<sup>3</sup>

2kg to cover 5.5m<sup>3</sup>
4kg to cover 11.0m<sup>3</sup>
9kg to cover 24.76m<sup>3</sup>
12kg to cover 33.0m<sup>3</sup>
16kg to cover 44.0m<sup>3</sup>

HCFC-124:  $1.1 \text{kg to cover } 2.1 \text{m}^3$ 

1.9kg to cover 3.5m<sup>3</sup>
3.1kg to cover 5.7m<sup>3</sup>
4.1kg to cover 7.5m<sup>3</sup>
5.7kg to cover 10.5m<sup>3</sup>
7.2kg to cover 13.5m<sup>3</sup>
10.7kg to cover 19.8m<sup>3</sup>
13.8kg to cover 25.5m<sup>3</sup>
15.3kg to cover 28.3m<sup>3</sup>
19.5kg to cover 36.1m<sup>3</sup>

VIII.7

- 8.4 Layout plans for both total flooding systems and fixed sprayer units are to be submitted to this Department for consideration prior to installation.
- 8.5 All premises protected by FM 200, NAFS-III, Inergen, CEA-410 and HFC-23 fixed installations or NAFS-III and HCFC-124 fixed sprayer units shall be suitably marked with the appropriate symbol on or near the entrance door. These symbols are to be of the design, colour and size as shown on the diagrams as Appendices B to E.

### 8.6 <u>Clean Agent Modular Systems</u>

- 8.6.1 Clean agent modular systems shall be installed in accordance with NFPA Standard 2001 and UL Standard 1058.
- 8.6.2 Requirements for approvals and the location of containers are same as for the Halon modular systems in paragraph 7.

Signed
(HSU King-ping)
for Director of Fire Services

Date: 22 October 1996

(Revised on 5 November 1997)

