

**CODE OF PRACTICE FOR FACTORY LAYOUT – SAFETY, HEALTH
AND WELFARE CONSIDERATIONS**

AMENDMENT NO. 2

September 2003

1. **Page 7, Foreword**

Insert the following after the second paragraph:

This Code makes reference to the Code of Practice for Fire Precautions in Buildings, which is mentioned under the Fire Safety Act 1993 and the Fire Safety Regulations 1994 issued by the Singapore Civil Defence Force.

2. **Page 9, Clause 1.1 Space requirements**

Replace subclauses 1.1.7, 1.1.10 and 1.1.11 with the following:

- a) **1.1.7** Means of escape shall be provided for all factories as specified under the Code of Practice for Fire Precautions in Buildings. Required exits shall be kept readily accessible, and doors shall be openable and unobstructed at all times during the occupancy of the building.
- b) **1.1.10** A means of escape or exit from the interior of the building to an exterior space shall be provided by the use of the following either singly or in combination: exterior door openings, exit staircases, exit ramps or exit passageways. In the case of an exit leading to a separate building, exits also include linkways, walkways, bridges and balconies. Exit shall not include access stairs, aisles, corridor doors or corridors and access doors to rooms or spaces in occupancy areas.
- c) **1.1.11** The determination of exit requirements for a building shall be based upon the type of use or occupancy of the building, the occupant load, the floor area, the travel distance to an exit and the capacity of exits as specified under in the Code of Practice for Fire Precautions in Buildings (see Table 1).

3. **Page 10, Subclauses 1.1.12 and 1.1.13**

Replace Subclauses 1.1.12 and 1.1.13 with the following:

1.1.12 Layout of the factory floor passageway shall have a minimum width of at least 1.2 metres and it shall be clearly demarcated and kept free from obstruction.

4. **Page 10, Clause 1.2 Site planning**

Replace the entire clause with the following:

1.2.1 Accessway shall be provided for accessibility of site to fire fighting appliances. To permit fire-fighting appliances to be deployed, the accessway shall have a minimum width of 6 m throughout its entire length. Access openings shall be provided along the external walls of buildings fronting the accessway to provide access into the building for fire fighting and rescue operations.

1.2.2 Every part of a fire engine access road and/or an accessway in a private lot shall be within an unobstructed distance of 50 m from a hydrant. Where a public hydrant conforming to such requirements is not available, private hydrant(s) shall be provided. Siting and types of fire hydrants shall comply with the requirements stated in SS CP 29.

Singapore Standard CP 27 : 1999
Amendment No. 2

Table 1 – Determination of exit requirements

Type of occupancy	Max travel distance (m) (one-way travel)		Max travel distance (m) (two-way escape)		Capacity No of persons per unit of width (see Note 1)				Min width (m)		Max dead end (m)	
	Unsprinklered	Sprinklered	Unsprinklered	Sprinklered	Door opening (see Note 3 and 4)		Staircases (see Note 2)	Ramps corridors exits passageways (see Note 3)	Stairs	Corridors	Corridors	
				To outdoors at ground level	Other exit & corridor doors	Unsprinklered					Sprinklered	
High hazard	10	20	20	35	50	40	30	50	1	1	15	20
Industrial buildings (factories, workshops, godown, warehouse)	15	25	30	60	100	80	60	100	1	1	15	20

NOTE 1 – Unit of width = 0.5 metres

NOTE 2 – See section on 'Determination of exit requirements' in the Code of Practice for Fire Precautions in Buildings.

NOTE 3 – See section on 'Means of escape requirements – General' in the Code of Practice for Fire Precautions in Buildings.

NOTE 4 – Where a door opening is divided by mullions into two or more openings, each such opening shall be measured separately in computing the number of units of exit width.

5. **Page 16, Subclause 1.13.1(b)**

Replace 1.13.1(b) with the following:

- (b) Boiler rooms, transformer rooms, generator rooms, storage areas of material that are highly combustible or flammable, and any other area of special high risk shall be separated from other parts of the building by compartment walls and floors having fire resistance of not less than 2 hours. If the building is protected by an automatic sprinkler system, the fire resistance rating of the compartment walls and floors can be reduced to 1 hour.

6. **Page 17, Subclauses 1.13.1(d)**

Replace 1.13.1(d) and the table with the following:

- (d) The compartment of buildings of high hazard occupancy, as specified under the Code of Practice for Fire Precautions in Buildings, shall not exceed the sizes given and each compartment shall comprise one storey only.

Table 2 – Size limitation of building and compartment

Compartments	Maximum floor area	Maximum cubical space
Compartment below ground level	1000 m ²	3750 m ³
Compartments between average ground level and a height of 24 m	2000 m ²	7500 m ³

7. **Page 17, Subclause 1.13.1(e)**

Replace 1.13.1(e) with the following:

- (e) No storey of a building, the habitable height of which is more than 24 m, shall be used for the storage of substances of highly combustible nature.

8. **Page 20, Subclause 2.1.17**

Replace the entire subclause with the following:

2.1.17 Emergency lighting for occupied areas shall be provided along paths leading to corridors, lobbies and exits in all occupied areas where the direct distance from the entry point of the corridor, lobby or exit to the furthest point in the area concerned exceeds 13 m; or over the whole of such area if there are no explicit paths leading to corridors, lobbies and exits.