

L.N. 3 of 2011

Building (Construction) (Amendment) Regulation 2011

(Made by the Secretary for Development under section 38
of the Buildings Ordinance (Cap. 123))

1. Commencement

This Regulation comes into operation on 1 August 2011.

2. Building (Construction) Regulations amended

The Building (Construction) Regulations (Cap. 123 sub. leg. B) are amended as set out in section 3.

3. Regulation 17 amended (Imposed loads)

(1) Regulation 17(1)(a)(ii)—

Repeal

“300 mm side; or”

Substitute

“50 mm side (or over any square otherwise specified in that column) or the line load specified in that column,”.

(2) Regulation 17(1)(a)—

Repeal subparagraph (iii).

(3) Regulation 17(1)(a), Chinese text—

Repeal

“三”

Substitute

“兩”.

- (4) Regulation 17(1)—
Repeal paragraph (b).
- (5) Regulation 17(1)(c), before “a building”—
Add
“the floor of”.
- (6) Regulation 17(1)(c)(ii)—
Repeal the full stop
Substitute a semicolon.
- (7) After regulation 17(1)(c)—
Add
“(d) where the floor of a building is to support any equipment, machinery or display item that will result in a greater imposed load than that specified in Table 1, the load of any of those items has to be considered in determining the imposed load on the floor.”.
- (8) Regulation 17(1)—
Repeal Table 1
Substitute

“Table 1**Minimum Imposed Loads**

1	2	3	4
Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
1	Floors for— domestic use; dormitories; private sitting rooms, bedrooms and toilet rooms in hotels, motels and guesthouses; wards, bedrooms and toilet rooms in hospitals, nursing homes and residential care homes for elderly persons	2.0	2.0

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1	2	3	4
Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
2	<p>Floors for— medical consulting or treatment rooms; hospital operating theatres and X-ray rooms</p> <p>Floors for— laboratories; light workrooms with neither central power-driven machines nor storage; offices for general use; rooms for lightweight electrical and electronic installations</p> <p>Floors for— banking halls; kitchens and laundries not in domestic buildings</p>	<p>2.5</p> <p>3.0</p> <p>4.0</p>	<p>3.0</p> <p>4.5</p> <p>4.5</p>

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1	2	3	4
Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
3	<p>Floors for— childcare centres and kindergartens</p> <p>Floors for— billiard rooms and bowling alleys; classrooms, lecture rooms, tutorial rooms, computer rooms and reading rooms without book storage; dance practice rooms; leisure, recreational and amusement areas that cannot be used for assembly purposes</p> <p>Floors for— assembly areas with fixed seating⁽¹⁾;</p>	<p>2.5</p> <p>3.0</p>	<p>3.0</p> <p>4.5</p>

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1	2	3	4
Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
	<p>chapels, churches and places of worship with fixed seating⁽¹⁾;</p> <p>restaurants, night-clubs, lounges, bars, canteens, fast food shops and dining rooms not in domestic premises</p> <p>Floors for—</p> <p>art galleries and museums;</p> <p>grandstands;</p> <p>public halls;</p> <p>theatres and cinemas</p>	<p>4.0</p> <p>5.0</p>	<p>4.5</p> <p>4.5</p>

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1	2	3	4
Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
4	Floors for— department stores, supermarkets, markets and shops for display and sale of merchandise	5.0	4.5
5	Floors for— library rooms with book storage (excluding library stack rooms); offices for storage and normal filing purposes Floors for— (a) stack rooms in book stores and libraries	5.0 3.5 for each metre of storage height ⁽²⁾ but not less than 10.0	4.5 to be determined according to the weight of storage material, but not less than 9.0

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1	2	3	4
Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
	(b) cold storage	5.0 for each metre of storage height ⁽²⁾ but not less than 15.0	to be determined according to the weight of storage material, but not less than 9.0
	(c) paper storage in printing plants	8.0 for each metre of storage height ⁽²⁾	to be determined according to the weight of storage material, but not less than 9.0
	(d) battery rooms and uninterruptible power supply rooms	10.0 for each metre of storage height ⁽²⁾	to be determined according to the weight of storage material, but not less than 9.0

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Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
	<p>(e) general storage other than those specified in (a), (b), (c) or (d) immediately above, including storage in warehouses</p> <p>Floors for— plant rooms, boiler rooms, fan rooms, motor rooms and the like</p> <p>Floors for— workshops, factories and other buildings or parts of buildings of similar category for industrial use—</p> <p>(a) for light weight loads</p> <p>(b) for medium weight loads</p>	<p>2.5 for each metre of storage height⁽²⁾</p> <p>7.5</p> <p>5.0</p> <p>7.5</p>	<p>to be determined according to the weight of storage material, but not less than 9.0</p> <p>9.0</p> <p>9.0</p> <p>9.0</p>

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Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
	(c) for heavy weight loads	10.0	9.0
	(d) for printing plants	12.5	9.0
6	<p>Areas for—</p> <p>car parking, carriageways, floors, driveways and ramps used by vehicles—</p> <p>(a) for vehicles not exceeding 3 000 kg gross weight</p> <p>(b) for vehicles exceeding 3 000 kg gross weight</p>	<p>3.0</p> <p>to be determined according to recognized engineering principles</p>	<p>20.0 to be applied on plan over any square with a 200 mm side (instead of a 50 mm side)</p> <p>to be determined according to recognized engineering principles</p>

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1	2	3	4
Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
7	<p>Inaccessible roofs (where no access is provided except such access as may be necessary for maintenance work only) with a slope—</p> <p>(a) of or less than 5°</p> <p>(b) greater than 5° but less than 20°</p> <p>(c) of or greater than 20° but less than 40°</p> <p>(d) of or greater than 40°</p> <p>Accessible roofs (where access is provided in addition to such access as may be necessary for maintenance work only) with a slope—</p>	<p>2.0</p> <p>0.75</p> <p>linear interpolation from 0.75 to 0 according to the slope</p> <p>0</p>	<p>1.5</p> <p>1.5</p> <p>1.5</p> <p>1.5</p>

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1	2	3	4
Class	Use	Distributed load in kPa to be applied uniformly on plan	Concentrated load in kN to be applied on plan over any square with a 50 mm side (unless otherwise specified in this column), or line load in kN per metre length
	Stairs, landings and corridors	same as the floors to which they give access but not less than 3.0 and not more than 5.0	4.5

Notes:

- (1) Seating is regarded as fixed if the removal of the seating and the use of the relevant space for other purposes are unlikely to occur.
- (2) **Storage height** (貯存高度) means the height of the space between the following: the floor, and a physical constraint to the height of storage formed by a ceiling, soffit of a floor, roof or other obstruction.”.

(9) After regulation 17(1)—

Add

“(1A) The greatest applied load mentioned in subregulation (1) must be derived from reliable data obtained from a source recognized by the Building Authority.”.

(10) Regulation 17(2)(e)(iii)—

Repeal

“and floors used for storage purposes”.

(11) Regulation 17(2)(e)—

Repeal subparagraph (v)

Substitute

- “(v) forces produced by dynamic effects; or
- (vi) floors used for storage purposes; or
- (vii) loads from partitions the positions of which are not indicated on the plan of the building.”.

(12) Regulation 17(2)—

Repeal Table 2

Substitute

“Table 2

Reductions of Total Distributed Imposed Loads

Number of floors (including the roof) with loads qualifying for reduction carried by the member under consideration	Percentage reduction of total distributed imposed load on all floors (including the roof) carried by the member under consideration	
	Classes 1, 2, 3, 4 and 7 of Table 1	Workshops and factories under Class 5 of Table 1 with distributed imposed load of not less than 7.5 kPa
1	0	0
2	5	10
3	10	20

Number of floors (including the roof) with loads qualifying for reduction carried by the member under consideration	Percentage reduction of total distributed imposed load on all floors (including the roof) carried by the member under consideration	
	Classes 1, 2, 3, 4 and 7 of Table 1	Workshops and factories under Class 5 of Table 1 with distributed imposed load of not less than 7.5 kPa
4	15	25 maximum
5	20	
6	25	
7	30	
8	35	
over 8	40 maximum	

(13) Regulation 17(3)—

Repeal Table 3

Substitute

“Table 3

Minimum Horizontal Imposed Loads on Protective Barriers to Restrict or Control Movement of Persons

Category	Line load to be applied at a height of 1.1 m above floor level	Uniformly distributed load to be applied on the infill between floor and top rail	Concentrated load to be applied on any part of the infill between floor and top rail
	kN/m	kPa	kN
Areas where congregation of people is not expected	0.75	1.0	0.5
Areas where people may congregate but overcrowding is not expected	1.5	1.5	1.5
Areas susceptible to overcrowding	3.0	1.5	1.5

(14) Regulation 17—

Repeal subsection (4)**Substitute**

“(4) Vehicle barriers for carriageways, floors, driveways and ramps used by vehicles must be designed to withstand the greatest impact force anticipated subject to the following requirements—

- (a) the minimum design impact force on vehicle barriers is to be $[0.5 Mv^2 / (\delta_c + \delta_b)]$ kN,

where—

M is the gross mass in kg of the heaviest vehicle to be accommodated,

v is the velocity of the vehicle normal to the barrier in metre per second,

δ_c is the deformation of the vehicle in mm, and

δ_b is the deflection of the barrier in mm; and

- (b) the impact force is to be uniformly distributed over any length of 1.5 m and acting horizontally at the bumper height of the vehicle.”.

Carrie LAM
Secretary for Development

11 January 2011

Explanatory Note

This Regulation amends the Building (Construction) Regulations (Cap. 123 sub. leg. B) (*Regulations*) to—

- (a) update the imposed load requirements in the Regulations;
- (b) rearrange the generic classification of uses;
- (c) adjust the reduction factors on total distributed imposed loads;
- (d) rationalize the imposed load requirements on protective barriers; and
- (e) simplify the calculation of impact forces of vehicle barriers.