

Engineering Information

Live Loads on Floors 1

The live load is variable, and consists of the weight of people, furniture, stocks of goods, machinery, etc. The amount of this load, which should be added to the dead load, depends upon the use to which the building is to be put. Where the floor is required to support a considerable live load, concentrated at a particular place, such as a heavy safe or piece of machinery, special provision should be made in the floor construction for it.

Table V gives the live loads per square foot recommended as good practice in conservative building construction.

In designing the floors of office or buildings of like character, it is good practice to figure the full live load on the floor joists or beams, but to consider only a certain percentage as coming upon the girders, columns, and foundations, on the assumption that all of the floors will not be fully loaded at the same time. This percentage should be carefully considered in each case; and the amounts will depend upon the height of the building in question and the judgment of the designer.

Engineering Information

LIVE LOADS ON FLOORS				
Loading Class No.	Type of Floor	Minimum Load per unit area (kg./m ²)	Alternative minimum live load	
			For Slabs uniformly distributed over Span per metre width (kg.)	For Beams uniformly distributed over Span (kg.)
976	Floors of warehouses, workshops, factories buildings of similar category for heavy weight loads, floors of book stores, roofs and pavement lights over basements projecting under the public footpath.	976		
	Stairs corridors, landings and balconies not liable overcrowding:	195		
	For class 195a : Loading	195		
	For class 195b : Loading	293		
	For all other classes	488		
	Balconies liable to over crowing	488		

The lower value of 244 kg/m² should be taken where separate storage facilities are provided and the higher value of 390 kg./m² where such provisions are lacking.

40

Engineering Information

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Table No. 3			
Type	Slope of Roof	Imposed loads other than wind and snow	snow load
Roofs other than sheeted roofs	Flat, sloping or curved with slope up to and including 10°	147 kg/m ² measured on plan subject to a minimum of 91 kg uniformly distributed over any span of 0.305 m width of the roof slab and 726 kg. uniformly distributed over this span in the case of all beams.	Where snow is encountered additional allowance of 15 kg. per metre depth of snow measured on plan
	Sloping or curved roofs from 10° to 30° and including 30°	73. kg/m ² measured on plan or 91 kg. concentrated load	- do -
	Sloping or curved roofs greater than 30°	Nil	- do -
Sheeted	Flat, sloping or curved	To provide for loads incidental to maintenance all roof covering (other than glass) and supporting structure shall be capable of carrying load of 82 kg. concentrated on an area 12.7 cm square. This load is not in addition to wind load and shall be treated as occasional.	- do -

41