

Distribution of Houses by Predominant Materials of Roof and Wall and Level of Damage Risk

Table No. : KL 05

State : KERALA

MALAPPURAM

Wall / Roof		Census Houses		Level of Risk under								Flood Prone Area in %
		No. of Houses	%	EQ Zone				Wind Velocity m/s				
				V	IV	III	II	55 & 50	47	44 & 39	33	
				Area in %				Area in %				
						100				88.2	11.8	12.2
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	55,768	5.6									
	Urban	20,624	2.1									
	Total	76,392	7.7			M				M	L	VH
A2 - Stone Wall not packed with mortar	Rural	63,876	6.4									
	Urban	36,598	3.7									
	Total	100,474	10.1			M				L	VL	VH
Total - Category - A		176,866	17.7									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	408,881	41.0									
	Urban	374,795	37.6									
	Total	783,676	78.6			L				L	VL	H/M
Total - Category - B		783,676	78.6									
C1 - Concrete Wall	Rural	3,836	0.4									
	Urban	4,346	0.4									
	Total	8,182	0.8			VL				VL	VL	L/VL
C2 - Wood wall	Rural	2,618	0.3									
	Urban	1,447	0.1									
	Total	4,065	0.4			VL				M	L	H
Total - Category - C		12,247	1.2									
X - Other Materials	Rural	17,301	1.7									
	Urban	7,283	0.7									
	Total	24,584	2.4			VL				M	L	VH
Total - Category - X		24,584	2.5									
TOTAL HOUSES*		997,373										

ROOF												
R1 - Light Weight Sloping Roof	Rural	24,997	2.5									
	Urban	13,822	1.4									
	Total	38,819	3.9			L				H	M	VH
R2 - Heavy Weight Sloping Roof	Rural	266,289	26.7									
	Urban	158,200	15.9									
	Total	424,489	42.6			L				L	VL	H
R3 - Flat Roof	Rural	260,994	26.2									
	Urban	273,071	27.4									
	Total	534,065	53.6	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		997,373										

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **733 mm**

Housing Category : Wall Types

Category - A : Buildings in field-stone, rural structures, unburnt brick houses, clay houses

Category - B : Ordinary brick building; buildings of the large block & prefabricated type, half-timbered structures, building in natural hewn stone

Category - C : Reinforced building, well built wooden structures

Category - X : Other materials not covered in A,B,C. These are generally light.

Notes : 1. Flood prone area includes that protected area which may have more severe damage under failure of protection works. In some other areas the local damage may be severe under heavy rains and choked drainage.

2. Damage Risk for wall types is indicated assuming heavy flat roof in categories A, B and C (Reinforced Concrete) building

3. Source of Housing Data : Census of Housing, GOI, 2011

Housing Category : Roof Type

Category - R1 - Light Weight (Grass, Thatch, Bamboo, Wood, Mud, Plastic, Polythene, GI Metal, Asbestos Sheets, Other Materials)

Category - R2 - Heavy Weight (Tiles, Stone/Slate)

Category - R3 - Flat Roof (Brick, Concrete)

EQ Zone V : Very High Damage Risk Zone (MSK > IX)

EQ Zone IV : High Damage Risk Zone (MSK VIII)

EQ Zone III : Moderate Damage Risk Zone (MSK VII)

EQ Zone II : Low Damage Risk Zone (MSK < VI)

Level of Risk : VH = Very High; H = High;

M = Moderate; L = Low; VL = Very Low

* Total No.of Houses excluding Vacant/Locked Houses