

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

MANIPUR

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 %					
STATE - MANIPUR				100					34.0		66.0		1.8
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	210,319	35.0										
	Urban	101,919	17.0										
	Total	312,238	52.0	VH					VH		M		VH
A2 - Stone Wall not packed with mortar	Rural	2,338	0.4										
	Urban	2,357	0.4										
	Total	4,695	0.8	VH					H		L		VH
Total - Category - A		316,933	52.8										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	26,307	4.4										
	Urban	54,944	9.1										
	Total	81,251	13.5	H					H		L		H/M
Total - Category - B		81,251	13.5										
C1 - Concrete Wall	Rural	1,421	0.2										
	Urban	4,548	0.8										
	Total	5,969	1.0	M					L		VL		L/VL
C2 - Wood wall	Rural	49,875	8.3										
	Urban	12,825	2.1										
	Total	62,700	10.4	M					VH		M		H
Total - Category - C		68,669	11.4										
X - Other Materials	Rural	103,451	17.2										
	Urban	30,331	5.0										
	Total	133,782	22.2	M					VH		M		VH
Total - Category - X		133,782	22.3										
TOTAL HOUSES*		600,635											
ROOF													
R1 - Light Weight Sloping Roof	Rural	377,822	62.9										
	Urban	172,386	28.7										
	Total	550,208	91.6	M					VH		H		VH
R2 - Heavy Weight Sloping Roof	Rural	8,659	1.4										
	Urban	9,012	1.5										
	Total	17,671	2.9	H					H		L		H
R3 - Flat Roof	Rural	7,230	1.2										
	Urban	25,526	4.2										
	Total	32,756	5.4	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		600,635											

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