

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

Table No. : MN 08

State : MANIPUR

UKHRUL

Wall / Roof		Census Houses		Level of Risk under								
		No. of Houses	%	EQ Zone				Wind Velocity m/s				Flood Pron e Area
				V	IV	III	II	55 & 50	47	44 & 39	33	
				Area in %				Area in %				
				100						100		
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	5,495	13.3									
	Urban	133	0.3									
	Total	5,628	13.6	VH							<i>M</i>	
A2 - Stone Wall not packed with mortar	Rural	40	0.1									
	Urban	12	-									
	Total	52	0.1	VH							<i>L</i>	
Total - Category - A		5,680	13.8									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	1,002	2.4									
	Urban	603	1.5									
	Total	1,605	3.9	<i>H</i>							<i>L</i>	
Total - Category - B		1,605	3.9									
C1 - Concrete Wall	Rural	92	0.2									
	Urban	98	0.2									
	Total	190	0.4	<i>M</i>							<i>VL</i>	
C2 - Wood wall	Rural	25,903	62.8									
	Urban	4,562	11.1									
	Total	30,465	73.9	<i>M</i>							<i>M</i>	
Total - Category - C		30,655	74.3									
X - Other Materials	Rural	3,158	7.7									
	Urban	160	0.4									
	Total	3,318	8.0	<i>M</i>							<i>M</i>	
Total - Category - X		3,318	8.0									
TOTAL HOUSES*		41,258										
ROOF												
R1 - Light Weight Sloping Roof	Rural	35,122	85.1									
	Urban	5,217	12.6									
	Total	40,339	97.7	<i>M</i>							<i>H</i>	
R2 - Heavy Weight Sloping Roof	Rural	362	0.9									
	Urban	66	0.2									
	Total	428	1.1	<i>H</i>							<i>L</i>	
R3 - Flat Roof	Rural	206	0.5									
	Urban	285	0.7									
	Total	491	1.2	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		41,258										

Probable Maximum Precipitation at a Station of the district in 24 hrs is 320 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