

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

Table No. : PN 13

State : PUNJAB

MANSA

Wall / Roof		Census Houses		Level of Risk under								
		No. of Houses	%	EQ Zone				Wind Velocity m/s				Flood Prone Area in %
				V	IV	III	II	55 & 50	47	44 & 39	33	
				Area in %				Area in %				
WALL								90.5	9.5	10.6	89.4	
A1 - Mud & Unburnt Brick Wall	Rural	5,704	3.1									
	Urban	950	0.5									
	Total	6,654	3.6					M	L	VH	H	
A2 - Stone Wall not packed with mortar	Rural	904	0.5									VH
	Urban	446	0.2									
	Total	1,350	0.7					M	L	H	M	
Total - Category - A		8,004	4.4									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	128,095	69.8									
	Urban	40,604	22.1									
	Total	168,699	91.9					L	VL	H	M	
Total - Category - B		168,699	92.0									H/M
C1 - Concrete Wall	Rural	2,801	1.5									
	Urban	2,271	1.2									
	Total	5,072	2.7					VL	VL	L	VL	
C2 - Wood wall	Rural	75	-									
	Urban	32	-									
	Total	107	-					VL	VL	VH	H	
Total - Category - C		5,179	2.8									
X - Other Materials	Rural	1,169	0.6									
	Urban	384	0.2									
	Total	1,553	0.8					VL	VL	VH	H	
Total - Category - X		1,553	0.8									VH
TOTAL HOUSES*		183,435										

ROOF												
R1 - Light Weight Sloping Roof	Rural	22,619	12.3									
	Urban	3,523	1.9									
	Total	26,142	14.2					L	VL	VH	VH	
R2 - Heavy Weight Sloping Roof	Rural	28,994	15.8									
	Urban	2,158	1.2									
	Total	31,152	17.0					L	VL	H	M	
R3 - Flat Roof	Rural	87,135	47.5									
	Urban	39,006	21.3									
	Total	126,141	68.8	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		183,435										

Probable Maximum Precipitation at a Station of the district in 24 hrs is 400 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