

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

Table No. : PN 20

State : PUNJAB

BARNALA

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 %								
						100		98.7	1.3			76.6
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	3,039	2.1									
	Urban	1,252	0.9									
	Total	4,291	3.0				<i>M</i>		<i>VH</i>	<i>H</i>		<i>VH</i>
A2 - Stone Wall not packed with mortar	Rural	719	0.5									
	Urban	422	0.3									
	Total	1,141	0.8				<i>M</i>		<i>H</i>	<i>M</i>		<i>VH</i>
Total - Category - A		5,432	3.7									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	89,895	61.9									
	Urban	45,327	31.2									
	Total	135,222	93.1				<i>L</i>		<i>H</i>	<i>M</i>		<i>H/M</i>
Total - Category - B		135,222	93.2									
C1 - Concrete Wall	Rural	1,829	1.3									
	Urban	1,677	1.2									
	Total	3,506	2.5				<i>VL</i>		<i>L</i>	<i>VL</i>		<i>L/ VL</i>
C2 - Wood wall	Rural	29	-									
	Urban	25	-									
	Total	54	-				<i>VL</i>		<i>VH</i>	<i>H</i>		<i>H</i>
Total - Category - C		3,560	2.5									
X - Other Materials	Rural	587	0.4									
	Urban	327	0.2									
	Total	914	0.6				<i>VL</i>		<i>VH</i>	<i>H</i>		<i>VH</i>
Total - Category - X		914	0.6									
TOTAL HOUSES*		145,128										

ROOF												
R1 - Light Weight Sloping Roof	Rural	7,891	5.4									
	Urban	2,798	1.9									
	Total	10,689	7.3				<i>L</i>		<i>VH</i>	<i>VH</i>		<i>VH</i>
R2 - Heavy Weight Sloping Roof	Rural	22,276	15.3									
	Urban	4,443	3.1									
	Total	26,719	18.4				<i>L</i>		<i>H</i>	<i>M</i>		<i>H</i>
R3 - Flat Roof	Rural	65,931	45.4									
	Urban	41,789	28.8									
	Total	107,720	74.2	<i>Damage Risk as per that for the Wall supporting it</i>								
TOTAL HOUSES*		145,128										

Probable Maximum Precipitation at a Station of the district in 24 hrs is 440 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