

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

Table No. : PN 09

State : PUNJAB

FIROZPUR

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 %				
					1.3	67.1	31.5	16.8	83.2			51.4
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	50,492	10.7									
	Urban	5,729	1.2									
	Total	56,221	11.9		H	M	L	VH	H			VH
A2 - Stone Wall not packed with mortar	Rural	1,996	0.4									
	Urban	1,058	0.2									
	Total	3,054	0.6		H	M	L	H	M			VH
Total - Category - A		59,275	12.5									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	269,179	56.9									
	Urban	122,820	25.9									
	Total	391,999	82.8		M	L	VL	H	M			H/M
Total - Category - B		391,999	82.8									
C1 - Concrete Wall	Rural	6,317	1.3									
	Urban	7,681	1.6									
	Total	13,998	2.9		L	VL	VL	L	VL			L/VL
C2 - Wood wall	Rural	155	-									
	Urban	159	-									
	Total	314	-		L	VL	VL	VH	H			H
Total - Category - C		14,312	3.0									
X - Other Materials	Rural	6,672	1.4									
	Urban	1,043	0.2									
	Total	7,715	1.6		VL	VL	VL	VH	H			VH
Total - Category - X		7,715	1.6									
TOTAL HOUSES*		473,301										

<b>ROOF</b>												
<b>R1 - Light Weight Sloping Roof</b>	Rural	63,394	13.4									
	Urban	12,655	2.7									
	<b>Total</b>	<b>76,049</b>	<b>16.1</b>		M	L	VL	VH	VH			VH
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	93,956	19.9									
	Urban	19,896	4.2									
	<b>Total</b>	<b>113,852</b>	<b>24.1</b>		M	L	VL	H	M			H
<b>R3 - Flat Roof</b>	Rural	177,461	37.5									
	Urban	105,939	22.4									
	<b>Total</b>	<b>283,400</b>	<b>59.9</b>	<i>Damage Risk as per that for the Wall supporting it</i>								
<b>TOTAL HOUSES*</b>		<b>473,301</b>										

Probable Maximum Precipitation at a Station of the district in 24 hrs is **480 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