

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

**Table No. : PN 19**

**State : PUNJAB**

**SANGRUR**

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 %				
					1.9	98.1		99.5	.5			91.7
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	8,618	2.1									
	Urban	3,216	0.8									
	Total	11,834	2.9		H	M		VH	H			VH
A2 - Stone Wall not packed with mortar	Rural	2,560	0.6									
	Urban	828	0.2									
	Total	3,388	0.8		H	M		H	M			VH
Total - Category - A		15,222	3.6									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	254,663	60.9									
	Urban	129,016	30.8									
	Total	383,679	91.7		M	L		H	M			H/M
Total - Category - B		383,679	91.7									
C1 - Concrete Wall	Rural	9,597	2.3									
	Urban	6,362	1.5									
	Total	15,959	3.8		L	VL		L	VL			L/VL
C2 - Wood wall	Rural	207	-									
	Urban	195	-									
	Total	402	-		L	VL		VH	H			H
Total - Category - C		16,361	3.9									
X - Other Materials	Rural	1,890	0.5									
	Urban	1,175	0.3									
	Total	3,065	0.8		VL	VL		VH	H			VH
Total - Category - X		3,065	0.7									
TOTAL HOUSES*		418,327										

<b>ROOF</b>												
<b>R1 - Light Weight Sloping Roof</b>	Rural	27,472	6.6									
	Urban	10,637	2.5									
	<b>Total</b>	<b>38,109</b>	<b>9.1</b>		M	L		VH	VH			VH
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	61,327	14.7									
	Urban	10,424	2.5									
	<b>Total</b>	<b>71,751</b>	<b>17.2</b>		M	L		H	M			H
<b>R3 - Flat Roof</b>	Rural	188,736	45.1									
	Urban	119,731	28.6									
	<b>Total</b>	<b>308,467</b>	<b>73.7</b>	<i>Damage Risk as per that for the Wall supporting it</i>								
<b>TOTAL HOUSES*</b>		<b>418,327</b>										

**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