

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

**Table No. : HR 11**

**State : HARYANA**

**SIRSA**

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		100			
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	29,022	9.1									
	Urban	3,090	1.0									
	Total	32,112	10.1			M	L		H			
A2 - Stone Wall not packed with mortar	Rural	1,421	0.4									
	Urban	1,904	0.6									
	Total	3,325	1.0			M	L		M			
Total - Category - A		35,437	11.1									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	197,367	62.1									
	Urban	75,169	23.6									
	Total	272,536	85.7			L	VL		M			
Total - Category - B		272,536	85.7									
C1 - Concrete Wall	Rural	1,116	0.4									
	Urban	3,441	1.1									
	Total	4,557	1.5			VL	VL		VL			
C2 - Wood wall	Rural	159	-									
	Urban	74	-									
	Total	233	-			VL	VL		H			
Total - Category - C		4,790	1.5									
X - Other Materials	Rural	4,116	1.3									
	Urban	1,128	0.4									
	Total	5,244	1.7			VL	VL		H			
Total - Category - X		5,244	1.6									
TOTAL HOUSES*		318,007										
ROOF												
R1 - Light Weight Sloping Roof	Rural	59,615	18.7									
	Urban	9,111	2.9									
	Total	68,726	21.6			L	VL		VH			
R2 - Heavy Weight Sloping Roof	Rural	26,221	8.2									
	Urban	2,972	0.9									
	Total	29,193	9.1			L	VL		M			
R3 - Flat Roof	Rural	147,365	46.3									
	Urban	72,723	22.9									
	Total	220,088	69.2	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		318,007										

**Probable Maximum Precipitation at a Station of the district in 24 hrs is 300 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