

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

Table No. : HR 08

State : HARYANA

SONIPAT

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 %						
					80.7	19.3			99.3	.7			38.2	
WALL														
A1 - Mud & Unburnt Brick Wall	Rural	6,181	1.6											
	Urban	2,352	0.6											
	Total	8,533	2.2		H	M			VH	H				VH
A2 - Stone Wall not packed with mortar	Rural	2,681	0.7											
	Urban	1,794	0.5											
	Total	4,475	1.2		H	M			H	M				VH
Total - Category - A		13,008	3.5											
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	244,244	65.0											
	Urban	111,705	29.7											
	Total	355,949	94.7		M	L			H	M				H/M
Total - Category - B		355,949	94.7											
C1 - Concrete Wall	Rural	1,651	0.4											
	Urban	2,666	0.7											
	Total	4,317	1.1		L	VL			L	VL				L/VL
C2 - Wood wall	Rural	191	0.1											
	Urban	196	0.1											
	Total	387	0.2		L	VL			VH	H				H
Total - Category - C		4,704	1.3											
X - Other Materials	Rural	1,479	0.4											
	Urban	816	0.2											
	Total	2,295	0.6		VL	VL			VH	H				VH
Total - Category - X		2,295	0.6											
TOTAL HOUSES*		375,956												
ROOF														
R1 - Light Weight Sloping Roof	Rural	73,523	19.6											
	Urban	14,024	3.7											
	Total	87,547	23.3		M	L			VH	VH				VH
R2 - Heavy Weight Sloping Roof	Rural	93,280	24.8											
	Urban	32,142	8.5											
	Total	125,422	33.3		M	L			H	M				H
R3 - Flat Roof	Rural	89,624	23.8											
	Urban	73,363	19.5											
	Total	162,987	43.3	Damage Risk as per that for the Wall supporting it										
TOTAL HOUSES*		375,956												

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **725 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