

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

Table No. : HR 07

State : HARYANA

PANIPAT

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 %					
				59.1	40.9			100				35.3	
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	5,521	1.9										
	Urban	3,266	1.1										
	Total	8,787	3.0		<i>H</i>	<i>M</i>			<i>VH</i>			<i>VH</i>	
A2 - Stone Wall not packed with mortar	Rural	1,413	0.5										
	Urban	2,546	0.9										
	Total	3,959	1.4		<i>H</i>	<i>M</i>			<i>H</i>			<i>VH</i>	
Total - Category - A		12,746	4.3										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	148,420	50.1										
	Urban	126,101	42.6										
	Total	274,521	92.7		<i>M</i>	<i>L</i>			<i>H</i>			<i>H/M</i>	
Total - Category - B		274,521	92.7										
C1 - Concrete Wall	Rural	1,556	0.5										
	Urban	4,174	1.4										
	Total	5,730	1.9		<i>L</i>	<i>VL</i>			<i>L</i>			<i>L/ VL</i>	
C2 - Wood wall	Rural	101	-										
	Urban	556	0.2										
	Total	657	0.2		<i>L</i>	<i>VL</i>			<i>VH</i>			<i>H</i>	
Total - Category - C		6,387	2.2										
X - Other Materials	Rural	1,057	0.4										
	Urban	1,286	0.4										
	Total	2,343	0.8		<i>VL</i>	<i>VL</i>			<i>VH</i>			<i>VH</i>	
Total - Category - X		2,343	0.8										
TOTAL HOUSES*		295,997											
ROOF													
R1 - Light Weight Sloping Roof	Rural	46,829	15.8										
	Urban	21,315	7.2										
	Total	68,144	23.0		<i>M</i>	<i>L</i>			<i>VH</i>			<i>VH</i>	
R2 - Heavy Weight Sloping Roof	Rural	52,929	17.9										
	Urban	15,819	5.3										
	Total	68,748	23.2		<i>M</i>	<i>L</i>			<i>H</i>			<i>H</i>	
R3 - Flat Roof	Rural	58,310	19.7										
	Urban	100,795	34.1										
	Total	159,105	53.8		<i>Damage Risk as per that for the Wall supporting it</i>								
TOTAL HOUSES*		295,997											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 548 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, 2001

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