

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

Table No. : MP 04

State : MADHYA PRADESH

GWALIOR

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 %				
							100		100			
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	59,116	14.1									
	Urban	18,156	4.3									
	Total	77,272	18.4				L		H			
A2 - Stone Wall not packed with mortar	Rural	13,718	3.3									
	Urban	7,180	1.7									
	Total	20,898	5.0				L		M			
Total - Category - A		98,170	23.4									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	86,158	20.5									
	Urban	220,097	52.4									
	Total	306,255	72.9				VL		M			
Total - Category - B		306,255	73.0									
C1 - Concrete Wall	Rural	423	0.1									
	Urban	3,425	0.8									
	Total	3,848	0.9				VL		VL			
C2 - Wood wall	Rural	646	0.2									
	Urban	572	0.1									
	Total	1,218	0.3				VL		H			
Total - Category - C		5,066	1.2									
X - Other Materials	Rural	6,074	1.4									
	Urban	4,175	1.0									
	Total	10,249	2.4				VL		H			
Total - Category - X		10,249	2.4									
TOTAL HOUSES*		419,740										

ROOF												
R1 - Light Weight Sloping Roof	Rural	44,755	10.7									
	Urban	15,997	3.8									
	Total	60,752	14.5				VL		VH			
R2 - Heavy Weight Sloping Roof	Rural	109,629	26.1									
	Urban	132,519	31.6									
	Total	242,148	57.7				VL		M			
R3 - Flat Roof	Rural	11,751	2.8									
	Urban	105,089	25.0									
	Total	116,840	27.8	<i>Damage Risk as per that for the Wall supporting it</i>								
TOTAL HOUSES*		419,740										

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **536 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