

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

Table No. : MP 18

State : MADHYA PRADESH

UJJAIN

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 %					
WALL								100		100			
A1 - Mud & Unburnt Brick Wall	Rural	167,268	36.6										
	Urban	26,655	5.8										
	Total	193,923	42.4					<i>L</i>		<i>H</i>			
A2 - Stone Wall not packed with mortar	Rural	2,386	0.5										
	Urban	1,496	0.3										
	Total	3,882	0.8					<i>L</i>		<i>M</i>			
Total - Category - A		197,805	43.2										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	103,295	22.6										
	Urban	136,776	29.9										
	Total	240,071	52.5					<i>VL</i>		<i>M</i>			
Total - Category - B		240,071	52.5										
C1 - Concrete Wall	Rural	2,282	0.5										
	Urban	4,221	0.9										
	Total	6,503	1.4					<i>VL</i>		<i>VL</i>			
C2 - Wood wall	Rural	547	0.1										
	Urban	419	0.1										
	Total	966	0.2					<i>VL</i>		<i>H</i>			
Total - Category - C		7,469	1.6										
X - Other Materials	Rural	9,255	2.0										
	Urban	2,841	0.6										
	Total	12,096	2.6					<i>VL</i>		<i>H</i>			
Total - Category - X		12,096	2.6										
TOTAL HOUSES*		457,441											

ROOF													
R1 - Light Weight Sloping Roof	Rural	134,587	29.4										
	Urban	54,441	11.9										
	Total	189,028	41.3					<i>VL</i>		<i>VH</i>			
R2 - Heavy Weight Sloping Roof	Rural	114,298	25.0										
	Urban	44,537	9.7										
	Total	158,835	34.7					<i>VL</i>		<i>M</i>			
R3 - Flat Roof	Rural	36,148	7.9										
	Urban	73,430	16.1										
	Total	109,578	24.0	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		457,441											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 400 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