

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

Table No. : MP 03

State : MADHYA PRADESH

BHIND

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	78,024	22.7										
	Urban	8,583	2.5										
	Total	86,607	25.2					<i>L</i>		<i>H</i>			
A2 - Stone Wall not packed with mortar	Rural	3,658	1.1										
	Urban	1,135	0.3										
	Total	4,793	1.4					<i>L</i>		<i>M</i>			
Total - Category - A		91,400	26.6										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	172,724	50.2										
	Urban	70,421	20.5										
	Total	243,145	70.7					<i>VL</i>		<i>M</i>			
Total - Category - B		243,145	70.6										
C1 - Concrete Wall	Rural	315	0.1										
	Urban	185	0.1										
	Total	500	0.2					<i>VL</i>		<i>VL</i>			
C2 - Wood wall	Rural	248	0.1										
	Urban	90	-										
	Total	338	0.1					<i>VL</i>		<i>H</i>			
Total - Category - C		838	0.2										
X - Other Materials	Rural	7,677	2.2										
	Urban	1,180	0.3										
	Total	8,857	2.5					<i>VL</i>		<i>H</i>			
Total - Category - X		8,857	2.6										
TOTAL HOUSES*		344,240											

ROOF													
R1 - Light Weight Sloping Roof	Rural	53,654	15.6										
	Urban	6,333	1.8										
	Total	59,987	17.4					<i>VL</i>		<i>VH</i>			
R2 - Heavy Weight Sloping Roof	Rural	199,645	58.0										
	Urban	66,605	19.3										
	Total	266,250	77.3					<i>VL</i>		<i>M</i>			
R3 - Flat Roof	Rural	9,347	2.7										
	Urban	8,656	2.5										
	Total	18,003	5.2	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		344,240											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 547 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