

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

Table No. : MP 38

State : MADHYA PRADESH

CHHINDWARA

		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								59.7	40.3			100	
A1 - Mud & Unburnt Brick Wall	Rural	281,641	54.6										
	Urban	36,889	7.1										
	Total	318,530	61.7					<i>M</i>	<i>L</i>			<i>M</i>	
A2 - Stone Wall not packed with mortar	Rural	2,665	0.5										
	Urban	768	0.1										
	Total	3,433	0.6					<i>M</i>	<i>L</i>			<i>L</i>	
Total - Category - A		321,963	62.4										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	82,956	16.1										
	Urban	83,783	16.2										
	Total	166,739	32.3					<i>L</i>	<i>VL</i>			<i>L</i>	
Total - Category - B		166,739	32.3										
C1 - Concrete Wall	Rural	2,618	0.5										
	Urban	2,887	0.6										
	Total	5,505	1.1					<i>VL</i>	<i>VL</i>			<i>VL</i>	
C2 - Wood wall	Rural	5,037	1.0										
	Urban	286	0.1										
	Total	5,323	1.1					<i>VL</i>	<i>VL</i>			<i>M</i>	
Total - Category - C		10,828	2.1										
X - Other Materials	Rural	14,070	2.7										
	Urban	2,674	0.5										
	Total	16,744	3.2					<i>VL</i>	<i>VL</i>			<i>M</i>	
Total - Category - X		16,744	3.2										
TOTAL HOUSES*		516,274											

ROOF													
R1 - Light Weight Sloping Roof	Rural	43,083	8.3										
	Urban	28,601	5.5										
	Total	71,684	13.8					<i>L</i>	<i>VL</i>			<i>H</i>	
R2 - Heavy Weight Sloping Roof	Rural	306,106	59.3										
	Urban	46,081	8.9										
	Total	352,187	68.2					<i>L</i>	<i>VL</i>			<i>L</i>	
R3 - Flat Roof	Rural	39,798	7.7										
	Urban	52,605	10.2										
	Total	92,403	17.9	<i>Damage Risk as per that for the Wall supporting it</i>									
TOTAL HOUSES*		516,274											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 484 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