

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

Table No. : MP 30

State : MADHYA PRADESH

BETUL

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	190,621	50.2										
	Urban	20,440	5.4										
	Total	211,061	55.6					<i>M</i>			<i>M</i>		
A2 - Stone Wall not packed with mortar	Rural	2,540	0.7										
	Urban	331	0.1										
	Total	2,871	0.8					<i>M</i>			<i>L</i>		
Total - Category - A		213,932	56.3										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	78,003	20.5										
	Urban	52,933	13.9										
	Total	130,936	34.4					<i>L</i>			<i>L</i>		
Total - Category - B		130,936	34.5										
C1 - Concrete Wall	Rural	2,128	0.6										
	Urban	1,321	0.3										
	Total	3,449	0.9					<i>VL</i>			<i>VL</i>		
C2 - Wood wall	Rural	4,188	1.1										
	Urban	218	0.1										
	Total	4,406	1.2					<i>VL</i>			<i>M</i>		
Total - Category - C		7,855	2.1										
X - Other Materials	Rural	24,057	6.3										
	Urban	3,095	0.8										
	Total	27,152	7.1					<i>VL</i>			<i>M</i>		
Total - Category - X		27,152	7.1										
TOTAL HOUSES*		379,875											

ROOF													
R1 - Light Weight Sloping Roof	Rural	35,899	9.5										
	Urban	17,807	4.7										
	Total	53,706	14.2					<i>L</i>			<i>H</i>		
R2 - Heavy Weight Sloping Roof	Rural	235,326	61.9										
	Urban	24,157	6.4										
	Total	259,483	68.3					<i>L</i>			<i>L</i>		
R3 - Flat Roof	Rural	30,312	8.0										
	Urban	36,374	9.6										
	Total	66,686	17.6	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		379,875											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 491 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