

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

**Table No. : MP 21**

**State : MADHYA PRADESH**

**DHAR**

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 %				
						51.2	48.8		33.5	66.5		
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	183,591	37.8									
	Urban	17,175	3.5									
	Total	200,766	41.3			M	L		H	M		
A2 - Stone Wall not packed with mortar	Rural	7,939	1.6									
	Urban	880	0.2									
	Total	8,819	1.8			M	L		M	L		
Total - Category - A		209,585	43.2									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	160,364	33.0									
	Urban	67,886	14.0									
	Total	228,250	47.0			L	VL		M	L		
Total - Category - B		228,250	47.0									
C1 - Concrete Wall	Rural	3,173	0.7									
	Urban	4,356	0.9									
	Total	7,529	1.6			VL	VL		VL	VL		
C2 - Wood wall	Rural	13,886	2.9									
	Urban	158	-									
	Total	14,044	2.9			VL	VL		H	M		
Total - Category - C		21,573	4.4									
X - Other Materials	Rural	22,697	4.7									
	Urban	3,347	0.7									
	Total	26,044	5.4			VL	VL		H	M		
Total - Category - X		26,044	5.4									
TOTAL HOUSES*		485,452										

ROOF												
R1 - Light Weight Sloping Roof	Rural	158,565	32.7									
	Urban	34,910	7.2									
	Total	193,475	39.9			L	VL		VH	H		
R2 - Heavy Weight Sloping Roof	Rural	181,273	37.3									
	Urban	9,449	1.9									
	Total	190,722	39.2			L	VL		M	L		
R3 - Flat Roof	Rural	51,812	10.7									
	Urban	49,443	10.2									
	Total	101,255	20.9	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		485,452										

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **511 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