

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

## RAJASTHAN

Wall / Roof		Census Houses		Level of Risk under									
		No. of Houses	%	EQ Zone				Wind Velocity m/s				Flood Prone Area in %	
				V	IV	III	II	55 & 50	47	44 & 39	33		
				Area in %				Area in %					
STATE - RAJASTHAN					3.7	26.4	69.9		97.2	2.8			
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	3,089,906	19.1										
	Urban	179,109	1.1										
	Total	3,269,015	20.2		H	M	L		H	M			
A2 - Stone Wall not packed with mortar	Rural	875,259	5.4										
	Urban	250,669	1.6										
	Total	1,125,928	7.0		H	M	L		M	L			
Total - Category - A		4,394,943	27.2										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	7,522,173	46.6										
	Urban	3,546,277	22.0										
	Total	11,068,450	68.6		M	L	VL		M	L			
Total - Category - B		11,068,450	68.5										
C1 - Concrete Wall	Rural	26,657	0.2										
	Urban	37,713	0.2										
	Total	64,370	0.4		L	VL	VL		VL	VL			
C2 - Wood wall	Rural	70,605	0.4										
	Urban	12,678	0.1										
	Total	83,283	0.5		L	VL	VL		H	M			
Total - Category - C		147,653	0.9										
X - Other Materials	Rural	479,232	3.0										
	Urban	62,556	0.4										
	Total	541,788	3.4		VL	VL	VL		H	M			
Total - Category - X		541,788	3.4										
TOTAL HOUSES*		16,152,834											

<b>ROOF</b>												
<b>R1 - Light Weight Sloping Roof</b>	Rural	2,948,586	18.3									
	Urban	373,556	2.3									
	<b>Total</b>	<b>3,322,142</b>	<b>20.6</b>		M	L	VL		VH	H		
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	7,897,550	48.9									
	Urban	2,340,600	14.5									
	<b>Total</b>	<b>10,238,150</b>	<b>63.4</b>		M	L	VL		M	L		
<b>R3 - Flat Roof</b>	Rural	1,217,696	7.5									
	Urban	1,374,846	8.5									
	<b>Total</b>	<b>2,592,542</b>	<b>16.0</b>	Damage Risk as per that for the Wall supporting it								
<b>TOTAL HOUSES*</b>		<b>16,152,834</b>										

### 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