

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

**Table No. : RJ 03**

**State : RAJASTHAN**

**BIKANER**

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 %				
						53.4	46.6		100			
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	94,815	20.9									
	Urban	7,183	1.6									
	Total	101,998	22.5			M	L		H			
A2 - Stone Wall not packed with mortar	Rural	3,171	0.7									
	Urban	1,785	0.4									
	Total	4,956	1.1			M	L		M			
Total - Category - A		106,954	23.6									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	158,139	34.9									
	Urban	153,458	33.9									
	Total	311,597	68.8			L	VL		M			
Total - Category - B		311,597	68.8									
C1 - Concrete Wall	Rural	442	0.1									
	Urban	497	0.1									
	Total	939	0.2			VL	VL		VL			
C2 - Wood wall	Rural	2,425	0.5									
	Urban	145	-									
	Total	2,570	0.5			VL	VL		H			
Total - Category - C		3,509	0.8									
X - Other Materials	Rural	28,387	6.3									
	Urban	2,598	0.6									
	Total	30,985	6.9			VL	VL		H			
Total - Category - X		30,985	6.8									
TOTAL HOUSES*		453,045										

<b>ROOF</b>												
<b>R1 - Light Weight Sloping Roof</b>	Rural	126,384	27.9									
	Urban	10,223	2.3									
	<b>Total</b>	<b>136,607</b>	<b>30.2</b>			L	VL		VH			
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	136,905	30.2									
	Urban	142,347	31.4									
	<b>Total</b>	<b>279,252</b>	<b>61.6</b>			L	VL		M			
<b>R3 - Flat Roof</b>	Rural	24,090	5.3									
	Urban	13,096	2.9									
	<b>Total</b>	<b>37,186</b>	<b>8.2</b>	<i>Damage Risk as per that for the Wall supporting it</i>								
<b>TOTAL HOUSES*</b>		<b>453,045</b>										

**Probable Maximum Precipitation at a Station of the district in 24 hrs is 320 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