

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

**Table No. : UP 62**

**State : UTTAR PRADESH**

**BALLIA**

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 %					
					8.4	91.6				100			48.7
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	81,762	13.5										
	Urban	5,087	0.8										
	Total	86,849	14.3		H	M			H				VH
A2 - Stone Wall not packed with mortar	Rural	6,142	1.0										
	Urban	887	0.1										
	Total	7,029	1.1		H	M			M				VH
Total - Category - A		93,878	15.5										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	358,510	59.1										
	Urban	46,617	7.7										
	Total	405,127	66.8		M	L			M				H/M
Total - Category - B		405,127	66.8										
C1 - Concrete Wall	Rural	4,717	0.8										
	Urban	1,039	0.2										
	Total	5,756	1.0		L	VL			VL				L/VL
C2 - Wood wall	Rural	1,846	0.3										
	Urban	242	-										
	Total	2,088	0.3		L	VL			H				H
Total - Category - C		7,844	1.3										
X - Other Materials	Rural	94,217	15.5										
	Urban	5,076	0.8										
	Total	99,293	16.3		VL	VL			H				VH
Total - Category - X		99,293	16.4										
TOTAL HOUSES*		606,142											

<b>ROOF</b>												
<b>R1 - Light Weight Sloping Roof</b>	Rural	173,437	28.6									
	Urban	10,272	1.7									
	<b>Total</b>	<b>183,709</b>	<b>30.3</b>		M	L			VH			VH
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	114,183	18.8									
	Urban	12,012	2.0									
	<b>Total</b>	<b>126,195</b>	<b>20.8</b>		M	L			M			H
<b>R3 - Flat Roof</b>	Rural	259,574	42.8									
	Urban	36,664	6.0									
	<b>Total</b>	<b>296,238</b>	<b>48.8</b>	Damage Risk as per that for the Wall supporting it								
<b>TOTAL HOUSES*</b>		<b>606,142</b>										

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **523 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