

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

Table No. : UP 30

State : UTTAR PRADESH

ETAWAH

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 %				
WALL												17.9
A1 - Mud & Unburnt Brick Wall	Rural	38,728	11.7									
	Urban	2,692	0.8									
	Total	41,420	12.5					<i>M</i>	<i>L</i>		<i>H</i>	
A2 - Stone Wall not packed with mortar	Rural	2,016	0.6									
	Urban	945	0.3									
	Total	2,961	0.9					<i>M</i>	<i>L</i>		<i>M</i>	
Total - Category - A		44,381	13.4									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	180,620	54.7									
	Urban	62,562	18.9									
	Total	243,182	73.6					<i>L</i>	<i>VL</i>		<i>M</i>	
Total - Category - B		243,182	73.6									
C1 - Concrete Wall	Rural	2,511	0.8									
	Urban	1,620	0.5									
	Total	4,131	1.3					<i>VL</i>	<i>VL</i>		<i>VL</i>	
C2 - Wood wall	Rural	232	0.1									
	Urban	212	0.1									
	Total	444	0.2					<i>VL</i>	<i>VL</i>		<i>H</i>	
Total - Category - C		4,575	1.4									
X - Other Materials	Rural	28,174	8.5									
	Urban	9,906	3.0									
	Total	38,080	11.5					<i>VL</i>	<i>VL</i>		<i>H</i>	
Total - Category - X		38,080	11.5									
TOTAL HOUSES*		330,218										

ROOF													
R1 - Light Weight Sloping Roof	Rural	76,151	23.1										
	Urban	8,676	2.6										
	Total	84,827	25.7					<i>L</i>	<i>VL</i>		<i>VH</i>		
R2 - Heavy Weight Sloping Roof	Rural	45,262	13.7										
	Urban	5,652	1.7										
	Total	50,914	15.4					<i>L</i>	<i>VL</i>		<i>M</i>		
R3 - Flat Roof	Rural	130,868	39.6										
	Urban	63,609	19.3										
	Total	194,477	58.9					<i>Damage Risk as per that for the Wall supporting it</i>					
TOTAL HOUSES*		330,218											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 558 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