

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

**Table No. : JD 01**

**State : JHARKHAND**

**GARHWA**

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 %					
						91.7	8.3			100			
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	214,287	77.4										
	Urban	6,227	2.3										
	Total	220,514	79.7			M	L			M			
A2 - Stone Wall not packed with mortar	Rural	561	0.2										
	Urban	74	-										
	Total	635	0.2			M	L			L			
Total - Category - A		221,149	79.9										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	43,061	15.6										
	Urban	10,388	3.8										
	Total	53,449	19.4			L	VL			L			
Total - Category - B		53,449	19.3										
C1 - Concrete Wall	Rural	259	0.1										
	Urban	30	-										
	Total	289	0.1			VL	VL			VL			
C2 - Wood wall	Rural	116	-										
	Urban	7	-										
	Total	123	-			VL	VL			M			
Total - Category - C		412	0.1										
X - Other Materials	Rural	1,531	0.6										
	Urban	165	0.1										
	Total	1,696	0.7			VL	VL			M			
Total - Category - X		1,696	0.6										
TOTAL HOUSES*		276,706											
ROOF													
R1 - Light Weight Sloping Roof	Rural	32,453	11.7										
	Urban	2,006	0.7										
	Total	34,459	12.4			L	VL			H			
R2 - Heavy Weight Sloping Roof	Rural	196,015	70.8										
	Urban	6,187	2.2										
	Total	202,202	73.0			L	VL			L			
R3 - Flat Roof	Rural	31,347	11.3										
	Urban	8,698	3.1										
	Total	40,045	14.4	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		276,706											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **462 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