

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

**Table No. : WB 03**

**State : WEST BENGAL**

**KOCH BIHAR**

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 %					
				37.8	62.2					100			52.3
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	2,505	0.3										
	Urban	450	0.1										
	Total	2,955	0.4	VH	H				H			VH	
A2 - Stone Wall not packed with mortar	Rural	2,293	0.3										
	Urban	1,137	0.1										
	Total	3,430	0.4	VH	H				M			VH	
Total - Category - A		6,385	0.7										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	60,143	6.8										
	Urban	51,318	5.8										
	Total	111,461	12.6	H	M				M			H/M	
Total - Category - B		111,461	12.7										
C1 - Concrete Wall	Rural	8,682	1.0										
	Urban	2,785	0.3										
	Total	11,467	1.3	M	L				VL			L/VL	
C2 - Wood wall	Rural	5,987	0.7										
	Urban	2,476	0.3										
	Total	8,463	1.0	M	L				H			H	
Total - Category - C		19,930	2.3										
X - Other Materials	Rural	706,481	80.4										
	Urban	34,033	3.9										
	Total	740,514	84.3	M	VL				H			VH	
Total - Category - X		740,514	84.3										
TOTAL HOUSES*		878,290											

ROOF													
R1 - Light Weight Sloping Roof	Rural	769,566	87.6										
	Urban	69,859	8.0										
	Total	839,425	95.6	M	M				VH			VH	
R2 - Heavy Weight Sloping Roof	Rural	9,331	1.1										
	Urban	2,197	0.3										
	Total	11,528	1.4	H	M				M			H	
R3 - Flat Roof	Rural	7,194	0.8										
	Urban	20,143	2.3										
	Total	27,337	3.1	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		878,290											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **640 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