

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

**Table No. : GJ 19**

**State : GUJARAT**

**VADODARA**

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 %				
						100				100		17.7
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	157,044	14.9									
	Urban	25,018	2.4									
	Total	182,062	17.3			M				M		VH
A2 - Stone Wall not packed with mortar	Rural	3,048	0.3									
	Urban	1,400	0.1									
	Total	4,448	0.4			M				L		VH
Total - Category - A		186,510	17.7									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	247,761	23.6									
	Urban	505,473	48.1									
	Total	753,234	71.7			L				L		H/M
Total - Category - B		753,234	71.7									
C1 - Concrete Wall	Rural	11,018	1.0									
	Urban	24,154	2.3									
	Total	35,172	3.3			VL				VL		L/VL
C2 - Wood wall	Rural	2,959	0.3									
	Urban	1,876	0.2									
	Total	4,835	0.5			VL				M		H
Total - Category - C		40,007	3.8									
X - Other Materials	Rural	62,116	5.9									
	Urban	9,294	0.9									
	Total	71,410	6.8			VL				M		VH
Total - Category - X		71,410	6.8									
TOTAL HOUSES*		1,051,161										
ROOF												
R1 - Light Weight Sloping Roof	Rural	218,513	20.8									
	Urban	122,902	11.7									
	Total	341,415	32.5			L				H		VH
R2 - Heavy Weight Sloping Roof	Rural	157,321	15.0									
	Urban	18,216	1.7									
	Total	175,537	16.7			L				L		H
R3 - Flat Roof	Rural	108,112	10.3									
	Urban	426,097	40.5									
	Total	534,209	50.8	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		1,051,161										

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sq.km. is **552 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