

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

**Table No. : GJ 10**

**State : GUJARAT**

**JAMNAGAR**

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 %				
				42.9	57.1			99.7		.3		
<b>WALL</b>												
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	25,748	4.6									
	Urban	8,265	1.5									
	<b>Total</b>	<b>34,013</b>	<b>6.1</b>		<i>H</i>	<i>M</i>		<i>VH</i>		<i>M</i>		
<b>A2 - Stone Wall not packed with mortar</b>	Rural	25,200	4.5									
	Urban	6,077	1.1									
	<b>Total</b>	<b>31,277</b>	<b>5.6</b>		<i>H</i>	<i>M</i>		<i>H</i>		<i>L</i>		
<b>Total - Category - A</b>		<b>65,290</b>	<b>11.7</b>									
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	234,614	41.9									
	Urban	220,119	39.4									
	<b>Total</b>	<b>454,733</b>	<b>81.3</b>		<i>M</i>	<i>L</i>		<i>H</i>		<i>L</i>		
<b>Total - Category - B</b>		<b>454,733</b>	<b>81.3</b>									
<b>C1 - Concrete Wall</b>	Rural	10,938	2.0									
	Urban	14,027	2.5									
	<b>Total</b>	<b>24,965</b>	<b>4.5</b>		<i>L</i>	<i>VL</i>		<i>L</i>		<i>VL</i>		
<b>C2 - Wood wall</b>	Rural	1,643	0.3									
	Urban	1,734	0.3									
	<b>Total</b>	<b>3,377</b>	<b>0.6</b>		<i>L</i>	<i>VL</i>		<i>VH</i>		<i>M</i>		
<b>Total - Category - C</b>		<b>28,342</b>	<b>5.1</b>									
<b>X - Other Materials</b>	Rural	6,250	1.1									
	Urban	4,668	0.8									
	<b>Total</b>	<b>10,918</b>	<b>1.9</b>		<i>VL</i>	<i>VL</i>		<i>VH</i>		<i>M</i>		
<b>Total - Category - X</b>		<b>10,918</b>	<b>2.0</b>									
<b>TOTAL HOUSES*</b>		<b>559,283</b>										

<b>ROOF</b>													
<b>R1 - Light Weight Sloping Roof</b>	Rural	25,870	4.6										
	Urban	28,361	5.1										
	<b>Total</b>	<b>54,231</b>	<b>9.7</b>		<i>M</i>	<i>L</i>		<i>VH</i>		<i>H</i>			
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	154,993	27.7										
	Urban	57,612	10.3										
	<b>Total</b>	<b>212,605</b>	<b>38.0</b>		<i>M</i>	<i>L</i>		<i>H</i>		<i>L</i>			
<b>R3 - Flat Roof</b>	Rural	123,530	22.1										
	Urban	168,917	30.2										
	<b>Total</b>	<b>292,447</b>	<b>52.3</b>		<i>Damage Risk as per that for the Wall supporting it</i>								
<b>TOTAL HOUSES*</b>		<b>559,283</b>											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sq.km. is 928 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