

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

**Table No. : MH 14**

**State : MAHARASHTRA**

**YAVATMAL**

Wall / Roof		Census Houses		Level of Risk under									
		No. of Houses	%	EQ Zone				Wind Velocity m/s				Flood Prone Area	
				V	IV	III	II	55 & 50	47	44 & 39	33		
				Area in %				Area in %					
						2.4	97.6			100			
<b>WALL</b>													
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	229,568	30.4										
	Urban	24,164	3.2										
	<b>Total</b>	<b>253,732</b>	<b>33.6</b>					<i>M</i>	<i>L</i>			<i>M</i>	
<b>A2 - Stone Wall not packed with mortar</b>	Rural	13,649	1.8										
	Urban	2,769	0.4										
	<b>Total</b>	<b>16,418</b>	<b>2.2</b>					<i>M</i>	<i>L</i>			<i>L</i>	
<b>Total - Category - A</b>		<b>270,150</b>	<b>35.8</b>										
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	206,788	27.4										
	Urban	91,501	12.1										
	<b>Total</b>	<b>298,289</b>	<b>39.5</b>					<i>L</i>	<i>VL</i>			<i>L</i>	
<b>Total - Category - B</b>		<b>298,289</b>	<b>39.5</b>										
<b>C1 - Concrete Wall</b>	Rural	16,513	2.2										
	Urban	14,187	1.9										
	<b>Total</b>	<b>30,700</b>	<b>4.1</b>					<i>VL</i>	<i>VL</i>			<i>VL</i>	
<b>C2 - Wood wall</b>	Rural	23,773	3.1										
	Urban	9,327	1.2										
	<b>Total</b>	<b>33,100</b>	<b>4.3</b>					<i>VL</i>	<i>VL</i>			<i>M</i>	
<b>Total - Category - C</b>		<b>63,800</b>	<b>8.5</b>										
<b>X - Other Materials</b>	Rural	110,474	14.6										
	Urban	12,050	1.6										
	<b>Total</b>	<b>122,524</b>	<b>16.2</b>					<i>VL</i>	<i>VL</i>			<i>M</i>	
<b>Total - Category - X</b>		<b>122,524</b>	<b>16.2</b>										
<b>TOTAL HOUSES*</b>		<b>754,763</b>											

ROOF													
<b>R1 - Light Weight Sloping Roof</b>	Rural	430,546	57.0										
	Urban	64,805	8.6										
	<b>Total</b>	<b>495,351</b>	<b>65.6</b>					<i>L</i>	<i>VL</i>			<i>H</i>	
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	111,645	14.8										
	Urban	12,387	1.6										
	<b>Total</b>	<b>124,032</b>	<b>16.4</b>					<i>L</i>	<i>VL</i>			<i>L</i>	
<b>R3 - Flat Roof</b>	Rural	58,574	7.8										
	Urban	76,806	10.2										
	<b>Total</b>	<b>135,380</b>	<b>18.0</b>					Damage Risk as per that for the Wall supporting it					
<b>TOTAL HOUSES*</b>		<b>754,763</b>											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 516 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