

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

**Table No. : MH 32**

**State : MAHARASHTRA**

**RATNAGIRI**

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 %					
				56.0	44.0					100			
<b>WALL</b>													
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	158,677	28.9										
	Urban	6,009	1.1										
	<b>Total</b>	<b>164,686</b>	<b>30.0</b>		<i>H</i>	<i>M</i>					<i>M</i>		
<b>A2 - Stone Wall not packed with mortar</b>	Rural	29,737	5.4										
	Urban	5,359	1.0										
	<b>Total</b>	<b>35,096</b>	<b>6.4</b>		<i>H</i>	<i>M</i>					<i>L</i>		
<b>Total - Category - A</b>		<b>199,782</b>	<b>36.4</b>										
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	215,901	39.4										
	Urban	54,882	10.0										
	<b>Total</b>	<b>270,783</b>	<b>49.4</b>		<i>M</i>	<i>L</i>					<i>L</i>		
<b>Total - Category - B</b>		<b>270,783</b>	<b>49.4</b>										
<b>C1 - Concrete Wall</b>	Rural	12,334	2.2										
	Urban	10,422	1.9										
	<b>Total</b>	<b>22,756</b>	<b>4.1</b>		<i>L</i>	<i>VL</i>					<i>VL</i>		
<b>C2 - Wood wall</b>	Rural	5,077	0.9										
	Urban	761	0.1										
	<b>Total</b>	<b>5,838</b>	<b>1.0</b>		<i>L</i>	<i>VL</i>					<i>M</i>		
<b>Total - Category - C</b>		<b>28,594</b>	<b>5.2</b>										
<b>X - Other Materials</b>	Rural	45,351	8.3										
	Urban	4,119	0.8										
	<b>Total</b>	<b>49,470</b>	<b>9.0</b>		<i>VL</i>	<i>VL</i>					<i>M</i>		
<b>Total - Category - X</b>		<b>49,470</b>	<b>9.0</b>										
<b>TOTAL HOUSES*</b>		<b>548,629</b>											

<b>ROOF</b>													
<b>R1 - Light Weight Sloping Roof</b>	Rural	72,600	13.2										
	Urban	15,220	2.8										
	<b>Total</b>	<b>87,820</b>	<b>16.0</b>		<i>M</i>	<i>L</i>					<i>H</i>		
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	367,941	67.1										
	Urban	28,917	5.3										
	<b>Total</b>	<b>396,858</b>	<b>72.4</b>		<i>M</i>	<i>L</i>					<i>L</i>		
<b>R3 - Flat Roof</b>	Rural	26,536	4.8										
	Urban	37,415	6.8										
	<b>Total</b>	<b>63,951</b>	<b>11.6</b>	Damage Risk as per that for the Wall supporting it									
<b>TOTAL HOUSES*</b>		<b>548,629</b>											

Probable Maximum Precipitation at a Station of the district in 24 hrs is 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