

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

Table No. : MH 10

State : MAHARASHTRA

BHANDARA

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 %					
								100			100		
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	170,807	52.5										
	Urban	15,274	4.7										
	Total	186,081	57.2					<i>L</i>			<i>M</i>		
A2 - Stone Wall not packed with mortar	Rural	4,131	1.3										
	Urban	1,977	0.6										
	Total	6,108	1.9					<i>L</i>			<i>L</i>		
Total - Category - A		192,189	59.1										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	74,707	23.0										
	Urban	43,309	13.3										
	Total	118,016	36.3					<i>VL</i>			<i>L</i>		
Total - Category - B		118,016	36.3										
C1 - Concrete Wall	Rural	4,685	1.4										
	Urban	1,884	0.6										
	Total	6,569	2.0					<i>VL</i>			<i>VL</i>		
C2 - Wood wall	Rural	612	0.2										
	Urban	121	-										
	Total	733	0.2					<i>VL</i>			<i>M</i>		
Total - Category - C		7,302	2.2										
X - Other Materials	Rural	6,789	2.1										
	Urban	866	0.3										
	Total	7,655	2.4					<i>VL</i>			<i>M</i>		
Total - Category - X		7,655	2.4										
TOTAL HOUSES*		325,162											

ROOF													
R1 - Light Weight Sloping Roof	Rural	11,550	3.6										
	Urban	4,215	1.3										
	Total	15,765	4.9					<i>VL</i>			<i>H</i>		
R2 - Heavy Weight Sloping Roof	Rural	201,077	61.8										
	Urban	18,218	5.6										
	Total	219,295	67.4					<i>VL</i>			<i>L</i>		
R3 - Flat Roof	Rural	49,104	15.1										
	Urban	40,998	12.6										
	Total	90,102	27.7	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		325,162											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 511 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 chocked 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