

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

Table No. : MH 02

State : MAHARASHTRA

DHULE

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		
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	173,294	36.6										
	Urban	21,867	4.6										
	Total	195,161	41.2				<i>M</i>				<i>M</i>		
A2 - Stone Wall not packed with mortar	Rural	6,672	1.4										
	Urban	3,036	0.6										
	Total	9,708	2.0				<i>M</i>				<i>L</i>		
Total - Category - A		204,869	43.2										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	109,082	23.0										
	Urban	91,688	19.4										
	Total	200,770	42.4				<i>L</i>				<i>L</i>		
Total - Category - B		200,770	42.4										
C1 - Concrete Wall	Rural	8,612	1.8										
	Urban	7,766	1.6										
	Total	16,378	3.4				<i>VL</i>				<i>VL</i>		
C2 - Wood wall	Rural	2,249	0.5										
	Urban	2,345	0.5										
	Total	4,594	1.0				<i>VL</i>				<i>M</i>		
Total - Category - C		20,972	4.4										
X - Other Materials	Rural	43,357	9.2										
	Urban	3,804	0.8										
	Total	47,161	10.0				<i>VL</i>				<i>M</i>		
Total - Category - X		47,161	10.0										
TOTAL HOUSES*		473,772											

ROOF													
R1 - Light Weight Sloping Roof	Rural	230,348	48.6										
	Urban	50,605	10.7										
	Total	280,953	59.3				<i>L</i>				<i>H</i>		
R2 - Heavy Weight Sloping Roof	Rural	70,821	14.9										
	Urban	4,708	1.0										
	Total	75,529	15.9				<i>L</i>				<i>L</i>		
R3 - Flat Roof	Rural	42,097	8.9										
	Urban	75,193	15.9										
	Total	117,290	24.8	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		473,772											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 482 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