

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

INDIA

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 %				
INDIA				11.3	14.4	31.1	43.2	18.0	30.3	45.1	6.6	7.3
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	58,330,614	19.1									
	Urban	8,119,213	2.7									
	Total	66,449,827	21.8	VH	H	M	L	VH	H	M	L	VH
A2 - Stone Wall not packed with mortar	Rural	7,751,666	2.5									
	Urban	2,689,476	0.9									
	Total	10,441,142	3.4	VH	H	M	L	H	M	L	VL	VH
Total - Category - A		76,890,969	25.2									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	104,552,560	34.3									
	Urban	75,035,035	24.6									
	Total	179,587,595	58.9	H	M	L	VL	H	M	L	VL	H/M
Total - Category - B		179,587,595	58.9									
C1 - Concrete Wall	Rural	3,699,096	1.2									
	Urban	7,284,583	2.4									
	Total	10,983,679	3.6	M	L	VL	VL	L	VL	VL	VL	L/ VL
C2 - Wood wall	Rural	2,132,342	0.7									
	Urban	648,929	0.2									
	Total	2,781,271	0.9	M	L	VL	VL	VH	H	M	L	H
Total - Category - C		13,764,950	4.5									
X - Other Materials	Rural	30,097,412	9.9									
	Urban	4,541,522	1.5									
	Total	34,638,934	11.4	M	VL	VL	VL	VH	H	M	L	VH
Total - Category - X		34,638,934	11.4									
TOTAL HOUSES*		304,882,448										
ROOF												
R1 - Light Weight Sloping Roof	Rural	79,430,355	26.1									
	Urban	21,269,826	7.0									
	Total	100,700,181	33.1	M	M	L	VL	VH	VH	H	M	VH
R2 - Heavy Weight Sloping Roof	Rural	74,034,404	24.3									
	Urban	19,649,099	6.4									
	Total	93,683,503	30.7	H	M	L	VL	H	M	L	VL	H
R3 - Flat Roof	Rural	53,098,931	17.4									
	Urban	57,399,833	18.8									
	Total	110,498,764	36.2	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		304,882,448										

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