

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

Table No. : UK 10

State : UTTARAKHAND

CHAMPAWAT

Wall / Roof		Census Houses		Level of Risk under								Flood Prone Area in %	
		No. of Houses	%	EQ Zone				Wind Velocity m/s					
				V	IV	III	II	55 & 50	47	44 & 39	33		
				Area in %				Area in %					
					100				.6		99.4		
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	1,336	1.6										
	Urban	390	0.5										
	Total	1,726	2.1		H			VH		M			
A2 - Stone Wall not packed with mortar	Rural	16,937	19.9										
	Urban	83	0.1										
	Total	17,020	20.0		H			H		L			
Total - Category - A		18,746	22.0										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	49,326	58.0										
	Urban	9,092	10.7										
	Total	58,418	68.7		M			H		L			
Total - Category - B		58,418	68.7										
C1 - Concrete Wall	Rural	796	0.9										
	Urban	246	0.3										
	Total	1,042	1.2		L			L		VL			
C2 - Wood wall	Rural	2,735	3.2										
	Urban	276	0.3										
	Total	3,011	3.5		L			VH		M			
Total - Category - C		4,053	4.8										
X - Other Materials	Rural	2,558	3.0										
	Urban	1,295	1.5										
	Total	3,853	4.5		VL			VH		M			
Total - Category - X		3,853	4.5										
TOTAL HOUSES*		85,070											

ROOF													
R1 - Light Weight Sloping Roof	Rural	12,140	14.3										
	Urban	2,740	3.2										
	Total	14,880	17.5		M			VH		H			
R2 - Heavy Weight Sloping Roof	Rural	36,222	42.6										
	Urban	561	0.7										
	Total	36,783	43.3		M			H		L			
R3 - Flat Roof	Rural	25,326	29.8										
	Urban	8,081	9.5										
	Total	33,407	39.3	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		85,070											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **525 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