

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

**Table No. : HP 09**

**State : HIMACHAL PRADESH**

**SOLAN**

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 %					
				3.1	96.9			3.1		96.9			
<b>WALL</b>													
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	29,392	14.0										
	Urban	951	0.5										
	<b>Total</b>	<b>30,343</b>	<b>14.5</b>	VH	H			VH		M			
<b>A2 - Stone Wall not packed with mortar</b>	Rural	8,370	4.0										
	Urban	282	0.1										
	<b>Total</b>	<b>8,652</b>	<b>4.1</b>	VH	H			H		L			
<b>Total - Category - A</b>		<b>38,995</b>	<b>18.6</b>										
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	124,879	59.7										
	Urban	36,630	17.5										
	<b>Total</b>	<b>161,509</b>	<b>77.2</b>	H	M			H		L			
<b>Total - Category - B</b>		<b>161,509</b>	<b>77.2</b>										
<b>C1 - Concrete Wall</b>	Rural	2,285	1.1										
	Urban	419	0.2										
	<b>Total</b>	<b>2,704</b>	<b>1.3</b>	M	L			L		VL			
<b>C2 - Wood wall</b>	Rural	443	0.2										
	Urban	356	0.2										
	<b>Total</b>	<b>799</b>	<b>0.4</b>	M	L			VH		M			
<b>Total - Category - C</b>		<b>3,503</b>	<b>1.7</b>										
<b>X - Other Materials</b>	Rural	4,366	2.1										
	Urban	918	0.4										
	<b>Total</b>	<b>5,284</b>	<b>2.5</b>	M	VL			VH		M			
<b>Total - Category - X</b>		<b>5,284</b>	<b>2.5</b>										
<b>TOTAL HOUSES*</b>		<b>209,291</b>											

<b>ROOF</b>													
<b>R1 - Light Weight Sloping Roof</b>	Rural	59,538	28.4										
	Urban	5,709	2.7										
	<b>Total</b>	<b>65,247</b>	<b>31.1</b>	M	M			VH		H			
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	10,060	4.8										
	Urban	416	0.2										
	<b>Total</b>	<b>10,476</b>	<b>5.0</b>	H	M			H		L			
<b>R3 - Flat Roof</b>	Rural	100,137	47.8										
	Urban	33,431	16.0										
	<b>Total</b>	<b>133,568</b>	<b>63.8</b>	Damage Risk as per that for the Wall supporting it									
<b>TOTAL HOUSES*</b>		<b>209,291</b>											

**Probable Maximum Precipitation at a Station of the district in 24 hrs is 600 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