

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

**Table No. : KN 08**

**State : KARNATAKA**

**DHARWAD**

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	
<b>WALL</b>													
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	88,308	20.2										
	Urban	49,855	11.4										
	<b>Total</b>	<b>138,163</b>	<b>31.6</b>					<i>L</i>				<i>L</i>	
<b>A2 - Stone Wall not packed with mortar</b>	Rural	11,134	2.6										
	Urban	18,524	4.2										
	<b>Total</b>	<b>29,658</b>	<b>6.8</b>					<i>L</i>				<i>VL</i>	
<b>Total - Category - A</b>		<b>167,821</b>	<b>38.5</b>										
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	57,831	13.3										
	Urban	139,072	31.9										
	<b>Total</b>	<b>196,903</b>	<b>45.2</b>					<i>VL</i>				<i>VL</i>	
<b>Total - Category - B</b>		<b>196,903</b>	<b>45.1</b>										
<b>C1 - Concrete Wall</b>	Rural	4,200	1.0										
	Urban	38,016	8.7										
	<b>Total</b>	<b>42,216</b>	<b>9.7</b>					<i>VL</i>				<i>VL</i>	
<b>C2 - Wood wall</b>	Rural	1,621	0.4										
	Urban	1,904	0.4										
	<b>Total</b>	<b>3,525</b>	<b>0.8</b>					<i>VL</i>				<i>L</i>	
<b>Total - Category - C</b>		<b>45,741</b>	<b>10.5</b>										
<b>X - Other Materials</b>	Rural	17,945	4.1										
	Urban	8,022	1.8										
	<b>Total</b>	<b>25,967</b>	<b>5.9</b>					<i>VL</i>				<i>L</i>	
<b>Total - Category - X</b>		<b>25,967</b>	<b>5.9</b>										
<b>TOTAL HOUSES*</b>		<b>436,432</b>											

ROOF													
<b>R1 - Light Weight Sloping Roof</b>	Rural	77,772	17.8										
	Urban	56,208	12.9										
	<b>Total</b>	<b>133,980</b>	<b>30.7</b>					<i>VL</i>				<i>M</i>	
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	93,618	21.5										
	Urban	75,791	17.4										
	<b>Total</b>	<b>169,409</b>	<b>38.9</b>					<i>VL</i>				<i>VL</i>	
<b>R3 - Flat Roof</b>	Rural	9,649	2.2										
	Urban	123,394	28.3										
	<b>Total</b>	<b>133,043</b>	<b>30.5</b>	<i>Damage Risk as per that for the Wall supporting it</i>									
<b>TOTAL HOUSES*</b>		<b>436,432</b>											

**Probable Maximum Precipitation at a Station of the district in 24 hrs is 280 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