

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

Table No. : JD 10

State : JHARKHAND

BOKARO

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 %					
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	118,434	25.0										
	Urban	40,762	8.6										
	Total	159,196	33.6					<i>M</i>	<i>L</i>			<i>M</i>	
A2 - Stone Wall not packed with mortar	Rural	1,868	0.4										
	Urban	2,007	0.4										
	Total	3,875	0.8					<i>M</i>	<i>L</i>			<i>L</i>	
Total - Category - A		163,071	34.4										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	111,931	23.6										
	Urban	182,015	38.4										
	Total	293,946	62.0					<i>L</i>	<i>VL</i>			<i>L</i>	
Total - Category - B		293,946	61.9										
C1 - Concrete Wall	Rural	2,836	0.6										
	Urban	4,809	1.0										
	Total	7,645	1.6					<i>VL</i>	<i>VL</i>			<i>VL</i>	
C2 - Wood wall	Rural	124	-										
	Urban	654	0.1										
	Total	778	0.1					<i>VL</i>	<i>VL</i>			<i>M</i>	
Total - Category - C		8,423	1.8										
X - Other Materials	Rural	3,892	0.8										
	Urban	5,190	1.1										
	Total	9,082	1.9					<i>VL</i>	<i>VL</i>			<i>M</i>	
Total - Category - X		9,082	1.9										
TOTAL HOUSES*		474,522											

ROOF													
R1 - Light Weight Sloping Roof	Rural	37,659	7.9										
	Urban	56,355	11.9										
	Total	94,014	19.8					<i>L</i>	<i>VL</i>			<i>H</i>	
R2 - Heavy Weight Sloping Roof	Rural	112,365	23.7										
	Urban	39,788	8.4										
	Total	152,153	32.1					<i>L</i>	<i>VL</i>			<i>L</i>	
R3 - Flat Roof	Rural	89,061	18.8										
	Urban	139,294	29.4										
	Total	228,355	48.2					Damage Risk as per that for the Wall supporting it					
TOTAL HOUSES*		474,522											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 691 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

