

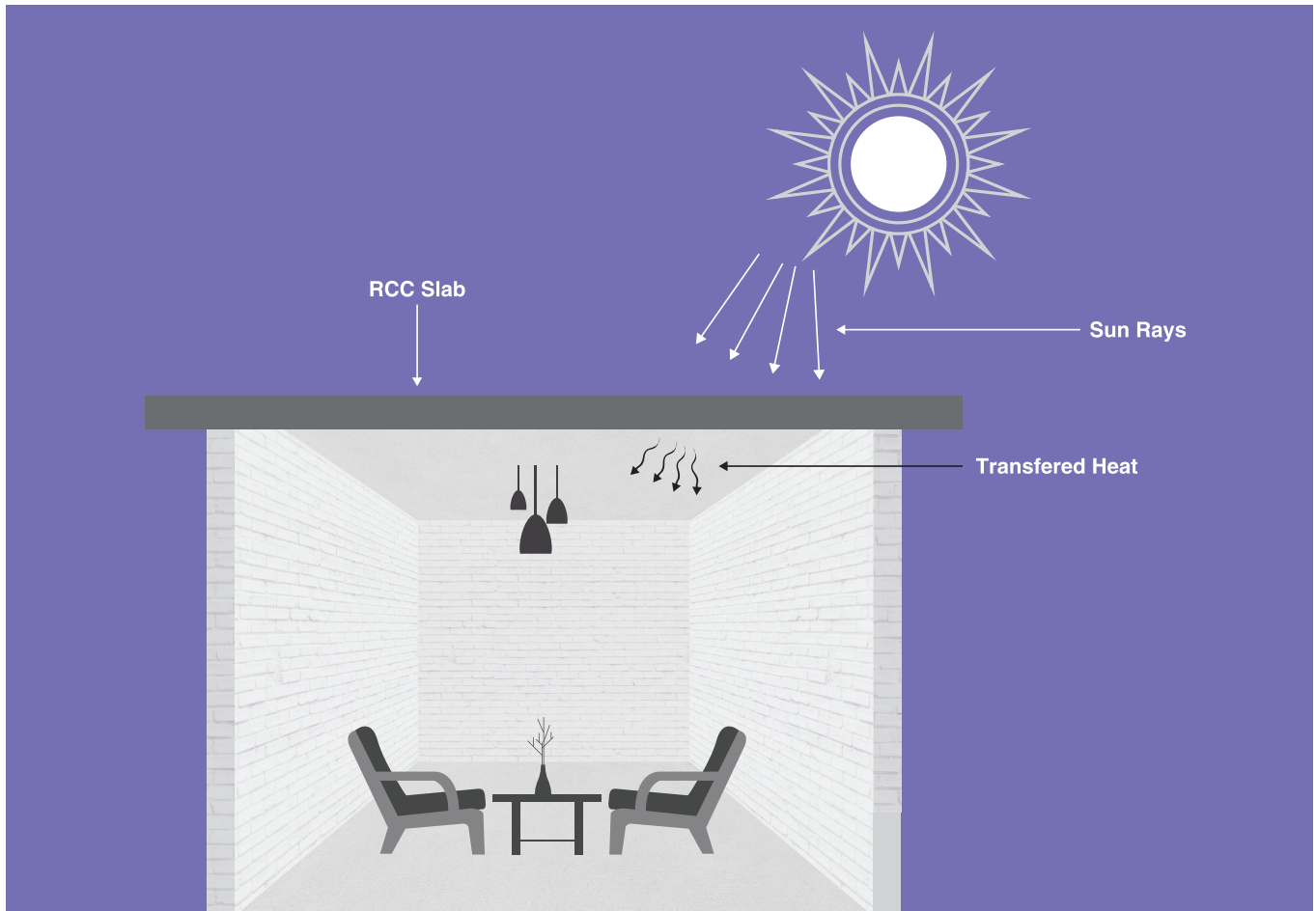
**WHERE  
HEAT  
GIVES  
WAY TO  
COMFORT**

**INDECK SYSTEMS**®

RCC DECK INSULATION

## RCC ROOFS CAUSE HEAT TRANSFER

Typically, a significant amount of heat passes inside the building through the roof. Generally roofs are made of RCC and the amount of heat that passes through it depends on material composition and its density. The thermal conductivity of RCC is approximately  $1.58 \text{ W/mK}$  at a density of  $2258 \text{ kg/m}^3$ . This makes it a good conductor of heat.



## CONVECTION AND CONDUCTION

When the atmospheric temperature is high, air in contact with the RCC roof heats the outer surface of the roof through radiation and convection. This heat is transferred through conduction from higher temperature side of the roof to the lower temperature side.

## MAKES THE OCCUPANT UNCOMFORTABLE

The thermal comfort of the building occupants is disrupted by this temperature volatility. Having an AC becomes necessary to maintain the temperature in such case. This increases the energy bills of the building.

- **RCC is a good conductor of heat**
- **It transfers heat inside the building through convection and conduction**
- **Volatile internal temperature makes AC mandatory**
- **This increases energy bills**

### INDECK INCREASES THERMAL RESISTANCE

The amount of heat transfer via conduction through the roof can be reduced by using insulation material with higher thermal resistance. This will reduce heat conduction to or from the building. The insulation material and size can vary according to the requirement of R-value. Insulation material can be used with protective layer which can avoid condensation or moisture absorption.

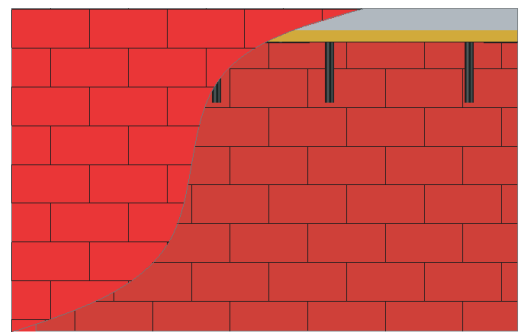
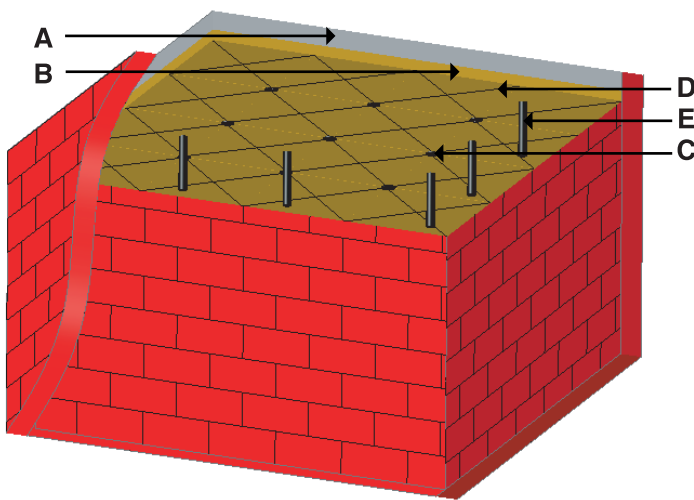
### Under Deck Insulation

Under Deck Insulation is applied from the bottom of the RCC slab. It is applied with the help of mechanical supports and later secured with GI wire. A false ceiling finally adds to the aesthetics of the space. This type of application limits the transference of heat from the RCC slab into the inert ambience of the building, thus enabling better usage of appliances and more energy savings.

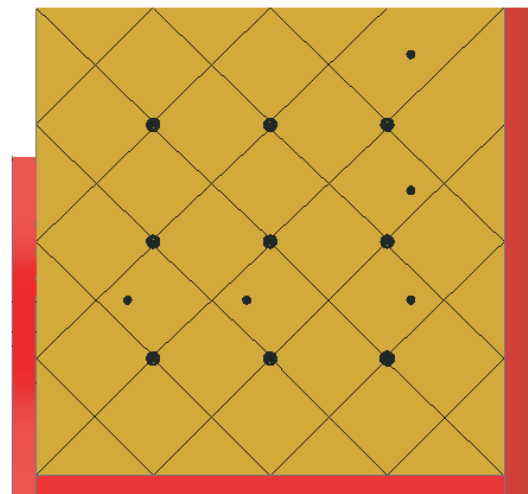
The thickness of material for Under Deck Insulation can vary from 25 mm to 75 mm. The material selection depends upon the application one wants to go ahead with.

### Ideal For

Private Residences, Hospitals, Industries, Offices, etc.



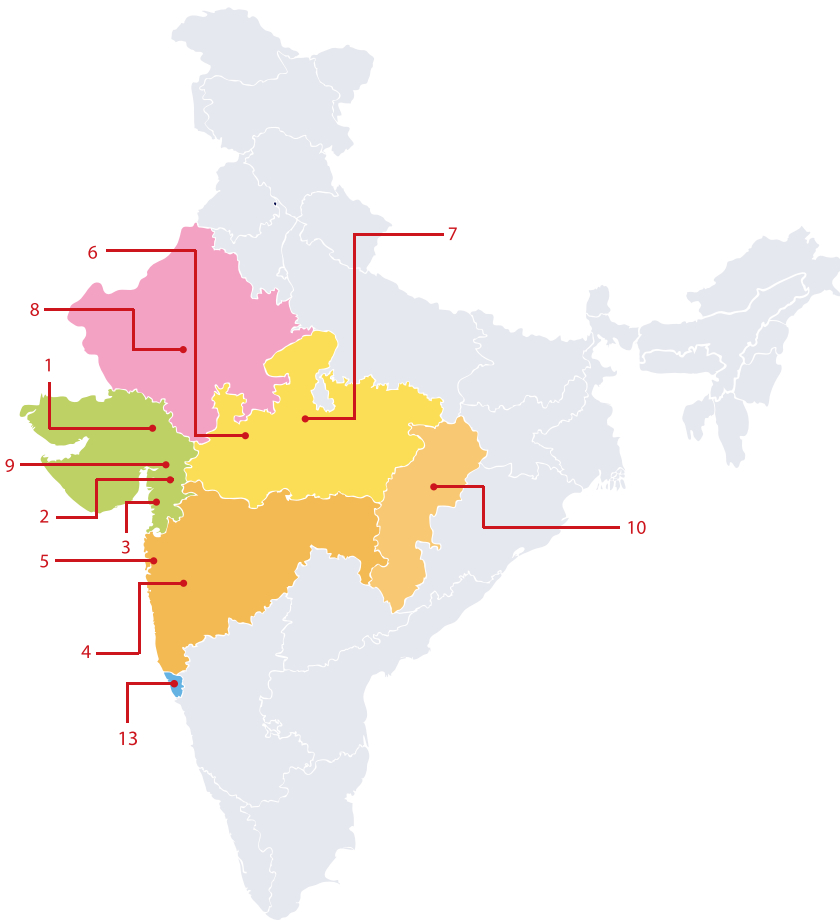
Front view



Bottom view

- |                        |                        |
|------------------------|------------------------|
| A) RCC                 | B) Insulation material |
| C) Washer              | D) GI wire             |
| E) Vertical suspension |                        |

- InDeck insulation reduces heat transfer
- It reduces the AC load
- This helps reduce the energy bills



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