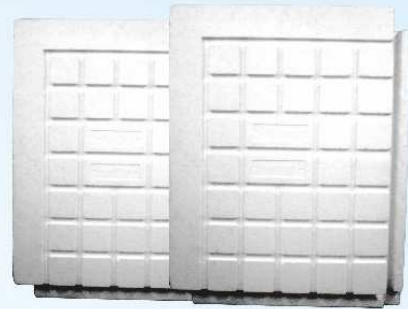




# KOOLTILE

THE OUR COMPLETE SOLUTION TO YOUR INSULATION REQUIREMENTS  
FOR  
GREEN BUILDINGS



- A global concept, now available in India
- Approved for use in government projects in energy saving constructions.
- For homes, offices, multi-storeyed commercial complexes and cold storages.
- Our range of products ensure insulation of building envelope - roof, walls, & even floors.
- Foolproof design specified for air tight, damp free insulation without any thermal bridges.

## INDIA'S 1ST AND ONLY MOLDED INSULATION TILE

- With 15 years' post Installation Warranty\*
- Tested and Certified to meet Green Building Insulation Norms
- R-Value & Density guaranteed for every tile, as per required insulation norms - BEE, IGBC & GRIHA ratings
- Designed to make your building energy efficient, despite the predominant 'WARM-HUMID' / 'HOT-DRY' or 'EXTREME COLD' Indian climate conditions
- Advantage of tremendous savings in product cost ; quick and easy application process
- High R-values, R-10 to R-15, retained throughout the life of building
- Material extracted from old building site can be reused on new construction surfaces
- Most cost effective Insulation product, pay back period 1-2 years
- Customer satisfaction guaranteed; services include technical support, final product application, post installation review & feedback

*\*Warranty Conditions Apply*



Tongue & Groove Locking System

**Choose 'White'  
to  
Build 'Green'**



★ Insulate today, Save for Life

★ Reduce Power Cost, Increase Indoor Comfort throughout the year

★ For Stable, Durable, Strong, Cost Effective, Eco Friendly Constructions

## WHY SHOULD YOU INSULATE WITH KOOLTILE

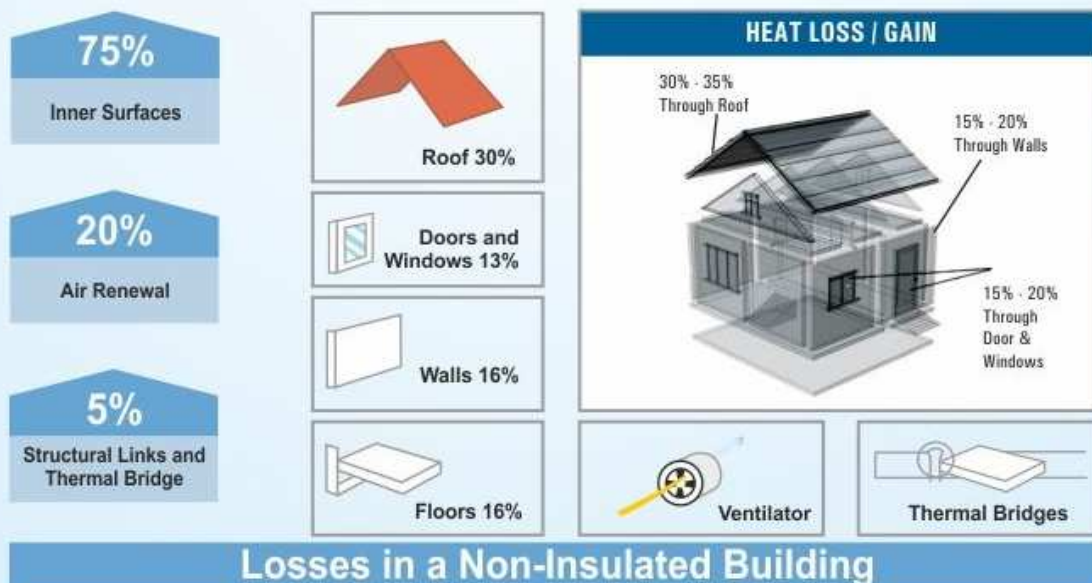
INVEST ONCE AND SAVE FOR A LIFETIME!! YOU NOT ONLY DO YOU SAVE, BUT THE INVESTMENT THAT YOU MAKE

# WHY SHOULD YOU INSULATE WITH KOOLTILE

INVEST ONCE AND SAVE FOR A LIFETIME!! YOU NOT ONLY DO YOU SAVE, BUT THE INVESTMENT THAT YOU MAKE PAYS YOU BACK WITH A 'COOL, HEALTHY AND COMFORTABLY GREENER' ENVIRONMENT

<p><b>AT HOME &amp; AT WORK</b></p>	<p>Enjoy an inside-outside temperature difference of 12-15 °C throughout the year!                  No seasonal worries of structural dampness seepage or cracks                  Feel secure in a stronger &amp; structurally durable house                  Adds to life of structure                  Decrease your cooling / heating load to save 30-40% on monthly electricity bills!                  Be proud to have a 'LEED certified' or 'GRIHA rated' Green Building                  Decrease your investment on Acs &amp; Rooms Heaters (lower tonnage/kilowatts) required</p>
<p><b>WORLD WIDE</b></p>	<p>Reduce carbon emissions to sustain the ozone layer                  Participate in the international energy saving &amp; conservation movement                  Use environment friendly &amp; safe products, free of CFCs, HCFCs &amp; other harmful chemicals                  EVERY INDIVIDUAL EFFORT TO MITIGATE THE EFFECTS OF THE GLOBAL WARMING COUNTS!!!</p>

1. Insulation is the single most cost-effective way to improve energy efficiency based on cost comparison per square foot.
2. Governments are recognizing this with new Energy Efficiency legislation and national and international commitments.
3. Use **KOOLTILE** on roof and walls to
  - Minimize heat transfer from outside in the summer months
  - substantially improve resident comfort level and reduce HVAC reduce HVAC requirement to lower your operating costs.
  - Minimize heat loss from the interior in winter months
4. Within 1-2 years the energy savings will pay for your **KOOLTILE** installation cost, there after energy conserved will be money saved. Saving energy will be even more important every year as tariff rates for power increase annually.
5. Life of **KOOLTILE** = Building Life as there is no degeneration of specified properties. Product is mold and not free.
6. Insulation with **KOOLTILE** provides 27 out of the required 100 points for a GRIHA rated project
7. **KOOLTILE** has been tested for attaining R-Value of 0.032 to 0.034 W/m.K
8. **KOOLTILE** has unique in-built surface, shaped for uniform bonding with screed or finishing layer. the tongue & groove edges join seamlessly to ensure thermal bridge free, air leakage proof insulation for all weather protection.
9. **KOOLTILE** is manufactured with totally non hazardous materials & methods, making it a most suitable GREEN BUILDING product



## WHAT IS BUILDING INSULATION ?



# WHAT IS BUILDING INSULATION ?

## MINIMISING HEAT TRANSFER BETWEEN BUILDING ENVELOPE AND AMBIENT BY

### Reducing the Effects of

1. **CONDUCTION** - Install a good Thermal Insulator within The Building Element to prevent maximum heat inflow thru roof and walls
2. **CONVECTION** – Minimise Air Leakage with Void-Free Insulation, without any Leaky Joints to stop heat gain by hot air ingress & maintain moisture balance
3. **RADIATION** - Incorporate Radiation Absorbing Insulation or an External Reflecting Layer on the Roof.  
Solar rays cannot penetrate concrete roof top or exterior walls; heat inflow is through windows, voids & open spaces

### And Incorporating

1. **INSULATION** - Materials with air trapped in closed cells to reduce conduction.  
e.g. Rigid foam as thermal barrier to decrease heat flow from outside to inner walls & ceilings
2. **AIR & MOISTURE PROOF** - Prevent movement of air and moisture through walls, windows, door frames, etc. by sealing leakages and using insulation material without voids as external envelope.
3. **EIFS** - Externally insulated walls prevent convection currents and uncomfortable hot/cold drafts.  
e.g. Graphite embedded insulation boards to absorb Infra red rays in solar radiation

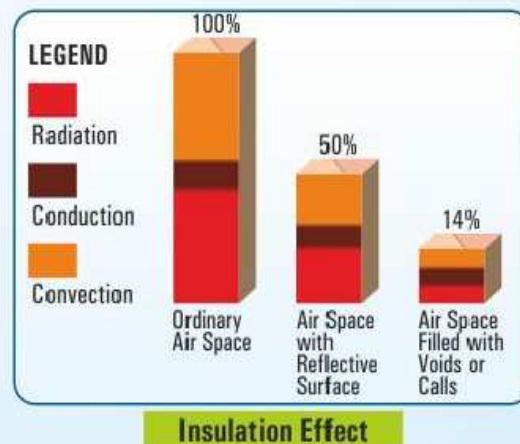
## INSULATED VS NON-INSULATED

- EXTENT OF ENERGY LOST UPTO 300 KWHr/sq m / Per Year (Valued at ₹5/KWHr = ₹15,000 spent per year on 10 sq m space)
- THIS LOSS CAN BE SAVED BY - Minimising the transfer of external heat energy by proper building envelope design, -and incorporating thermal insulation within building elements

## HEAT LOSS / GAIN DUE TO CONVECTION

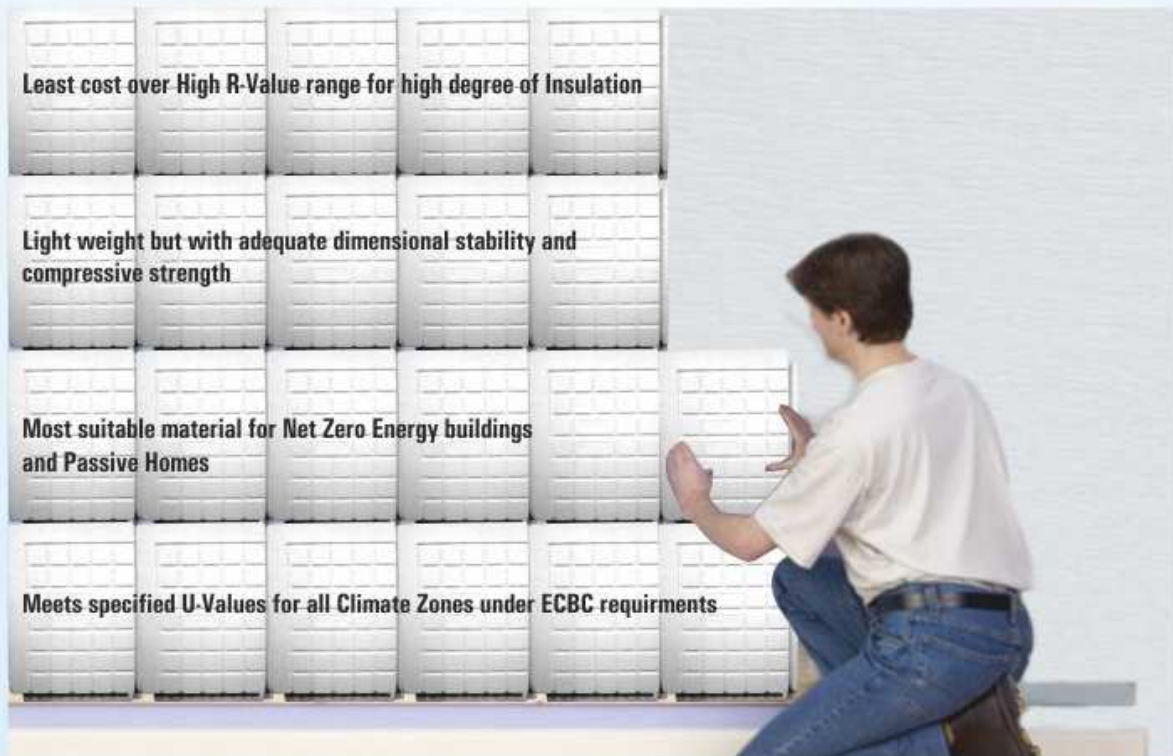
Transfer of heat by the movement of air through air gaps or leakages in the building envelope

- The graph here demonstrate the effects of insulation materials.
- Clearly, **Convection heat transfer**, a major component of heat flow, can be almost eliminated by the use of insulation.



# KOOLTILE : PRODUCT RANGE

PRODUCT SPECIFICATIONS					
NAME	CODE	R-VALUE	DIMENSION	DENSITY	APPLICATION
		m <sup>2</sup> .K/W	(mm)	kg/m <sup>3</sup>	
<b>KOOLTILE DIAMOND ( 40D )</b>					
REGULAR	KTR-R12	1.56	800x600x50	40	EXTERNAL ROOF
SUPREME	KTR-R13	2.19	800 x600x70	40	
PREMIUM	KTR-R16	2.66	800 x600x85	40	
<b>KOOLTILE GOLD ( 32D )</b>					
REGULAR	KTR-R09	1.52	800 x600x50	32	EXTERNAL ROOF
SUPREME	KTR-R12	2.13	800 x600x70	32	
PREMIUM	KTR-R15	2.58	800 x600x85	32	
<b>KOOLTILE SILVER ( 24D )</b>					
REGULAR	KTR-R08	1.52	800 x600x50	24	EXTERNAL ROOF
SUPREME	KTR-R11	2.13	800 x600x50	24	
PREMIUM	KTR-R14	2.58	800 x600x85	24	
<b>KOOLTILE EIFS ( 18D )</b>					
REGULAR	KTW-R08	1.52	800 x600x50	18	EXTERNAL WALL
SUPREME	KTW-R11	2.13	800 x600x70	18	
PREMIUM	KTW-R13	2.58	800 x600x85	18	

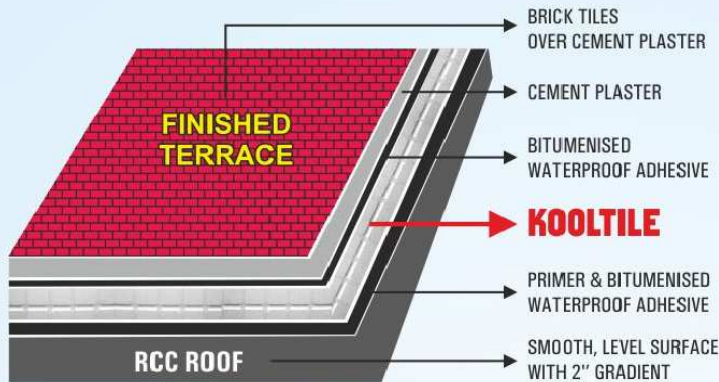


USE **KOOLTILE** TO BEAT THE SUMMER HEAT AND THE WINTER CHILL!



# THE WINTER CHILL!

## KOOLTILE - OVER DECK ROOF APPLICATION



Insulation is provided over the roof's RCC slab to prevent it from getting unbearably hot in summers or exceedingly cold in peak winters

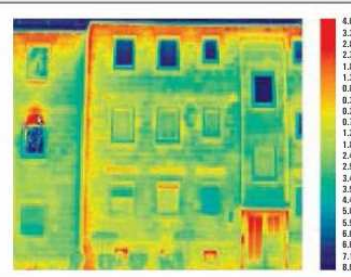
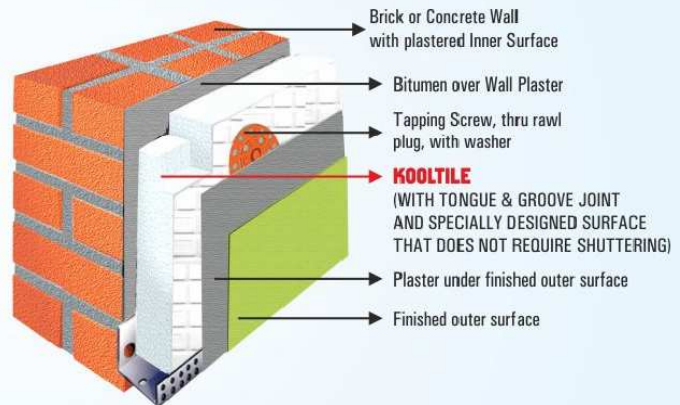
- DECREASES POWER CONSUMED TO COOL OR HEAT THE ROOMS
- CAN BE TREATED AS PART OF WATERPROOFING.
- ELIMINATES THERMAL BRIDGES TOTALLY
- USES HIGH SPECIFIC HEAT CAPACITY OF THE BUILDING ELEMENTS TO MAINTAIN COMFORT LEVELS IN CASE OF POWER FAILURE
- AS CONSTANT TEMPERATURE IS MAINTAINED ON ROOF SLAB THE STRUCTURAL DURABILITY INCREASES CONSIDERABLY
- NO CRACKS, SEEPAGE, LEAKAGE OR DAMP ROOF

## KOOLTILE - EXTERNAL WALL APPLICATION

- ONE OF THE MOST COST EFFECTIVE WALL INSULATION PRODUCT
- DESIGNED FOR APPLICATIONS ACROSS MULTIPLE SURFACES - ON ANY SHAPE, SIZE OR TYPE OF CONSTRUCTIONS
- ELIMINATES USE OF TEDIOUS FIXING METHODS
- AVAILABLE IN FIRE RETARDANT GRADE

### UNIQUE FEATURES AND BENEFITS OF OUR EXTERNAL WALL INSULATION SYSTEM :

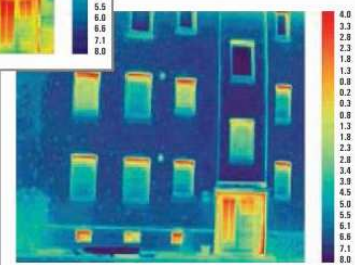
- Provides an insulated weather-proof, durable architectural facade
- Helps conserve energy, reduces the building's overall CO2 emissions
- Helps reduce heat loss or gain
- Reduces the risk of condensation
- Helps eliminate thermal bridging
- Provides substantial reduction in sound transmission
- Improves internal comfort levels even without ACs
- Provides beneficial cost savings for life
- Suitable for both new constructions and old
- Reduces recurring investment in building maintenance



Thermographic image - before refurbishment:  
The entire house is a thermal bridge.



Multi-family house after energetic renovation



Thermographic image - after refurbishment: The external wall is thermally insulated, but heat still leaks through windows and doors.

# KOOLTILE - AN INSULATION PRODUCT FROM RELIABLE INSUPACKS PVT. LTD.

# RELIABLE INSUPACKS PVT. LTD.

A FIRM PROMOTED IN 1995 BY –

- A TEAM OF ENTREPRENEURS, ENGINEERS AND PROFESSIONALS WELL EXPERIENCED IN THE FIELD OF EXPANDED POLYSTYRENE (EPS) MOLDING.
- WHILE PACKAGING PRODUCTS COMPRISE OVER 70% OF THE COMPANY'S BUSINESS (**Certified Samsung Eco Partner** Since 2005), RIPL HAS ALWAYS HAD A STRONG PRESENCE IN THE BUILDING INSULATION SEGMENT AS WELL (**COMMERCIAL, RESIDENTIAL & COLD STORAGE**).
- **NSIC – ONICRA RATING** : SEC 2A (HIGH PERFORMANCE CAPABILITY & HIGH FINANCIAL STRENGTH).
- **ISO 9000 & ISO 14000 CERTIFICATION SINCE 2001. QUALITY SYSTEMS & PROCEDURES** ADOPTED TO MAXIMISE CUSTOMER SATISFACTION LEVEL WITH STRICT ADHERENCE TO INTERNATIONAL QUALITY STANDARDS.
- **DIRECT INVOLVEMENT OF MANUFACTURER** AS AGAINST THIRD PARTY VENDORS ENSURES MEETING OF STANDARDS AND IMPLEMENTING CUSTOMER REQUIREMENTS SPEEDILY.
- **TECHNICALLY STRONG SUPPORT TEAM** ALLOWS EXCELLENT ON-SITE CO-ORDINATION.
- **OUR IN-HOUSE DESIGN TEAM CAN DESIGN & PROVIDE INSULATION ACCORDING TO YOUR SPECIFIED U-VALUES.**

## KOOLTILE HAS BEEN TESTED & CERTIFIED BY FOLLOWING INSTITUTIONS

1. CEPT University (Building Energy Performance Laboratory)  
**THERMAL CONDUCTIVITY : R-VALUE**
2. Shriram Institute For Industrial Research  
**COMPRESSIVE STRENGTH**



### RELIABLE INSUPACKS PVT. LTD.

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