



THERMOSHIELD

A different kind of exterior system

for a tougher kind of environment

SAVE UP TO
26%
ON YOUR
ENERGY BILLS !!!

Tested & Accredited by :





THERMOSHIELD

An innovative exterior / roofing technology combining strength, lightweight protection and integral insulation.

Thermoshield® products are Ceramic based, High Albedo (High Reflective), Non-Toxic protective Coatings, designed for Industrial, Commercial and Residential applications.

Thermoshield® products are designed to keep the structure cool and additionally works as a phenomenal water proofing applicant.

The Thermoshield® exterior / roof system becomes a seamless, continuous monolithic membrane impervious to adverse weather conditions, airborne contaminants, and extreme temperature fluctuations.

As shown by accelerated aging tests, the Thermoshield® system lasts longer than conventional roofs. It is cold applied, so it's safer going on. It is Non-Toxic in liquid or cured form hence is environmentally cleaner.



Space Age technology that stays on top.

The Thermoshield® Roof / Exterior system offers an exclusive formula featuring hollow ceramic borosilicate microspheres. These microspheres are similar to those used in the insulating and reflective ceramic tiles used on the NASA space shuttles.

These unique fluid applied ceramic coatings can be sprayed or rolled on to form a seamless monolithic seal over any size or shape building / roof.

*Thermoshield® exterior systems effectively dissipates and reflects solar radiation back into the atmosphere, resulting in an impressive reduction of **Solar loading**.*

*The Thermoshield® exterior systems can be applied directly to most clean, dry, sound substrates, including **metals, concrete, wood, asphalt shingles, tiles, asbestos, urethane foam and EPDM**.*

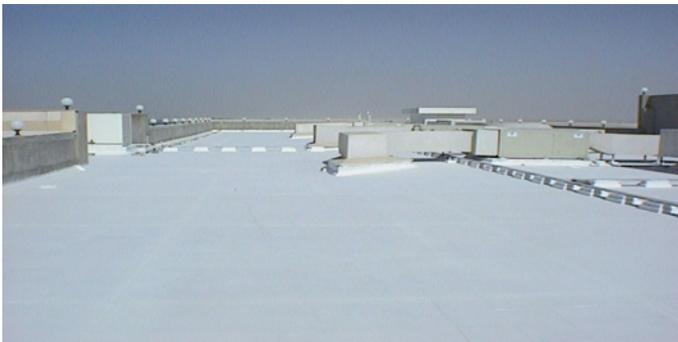


THERMOSHIELD

BENEFITS OF THERMOSHIELD®

- **HEAT INSULATION**
- **ENERGY SAVINGS**
- **FIRE RESISTANCE**
- **NON TOXIC**
- **FOOT TRAFFIC RESISTANCE**
- **LOW VOC**
- **EASY & LIGHTWEIGHT APPLICATION**
- **WATER PROOFING**
- **CRACK BRIDGING**
- **UV PROTECTION**
- **NOISE ABSORPTION**
- **ENVIRONMENT FRIENDLY**
- **MOULD, MILDEW, FUNGUS RESISTANT**
- **GREAT HAIL (SHOCK) RESISTANCE**

THERMOSHIELD® CAN BE APPLIED VIRTUALLY ON ANY KIND OF SURFACE



Concrete



Asbestos

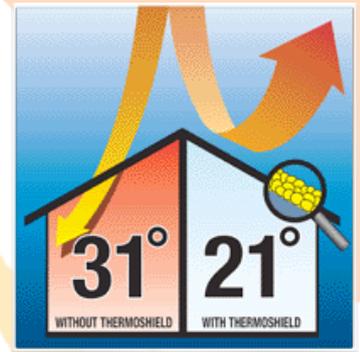


Tiles



Metal

THERMOSHIELD

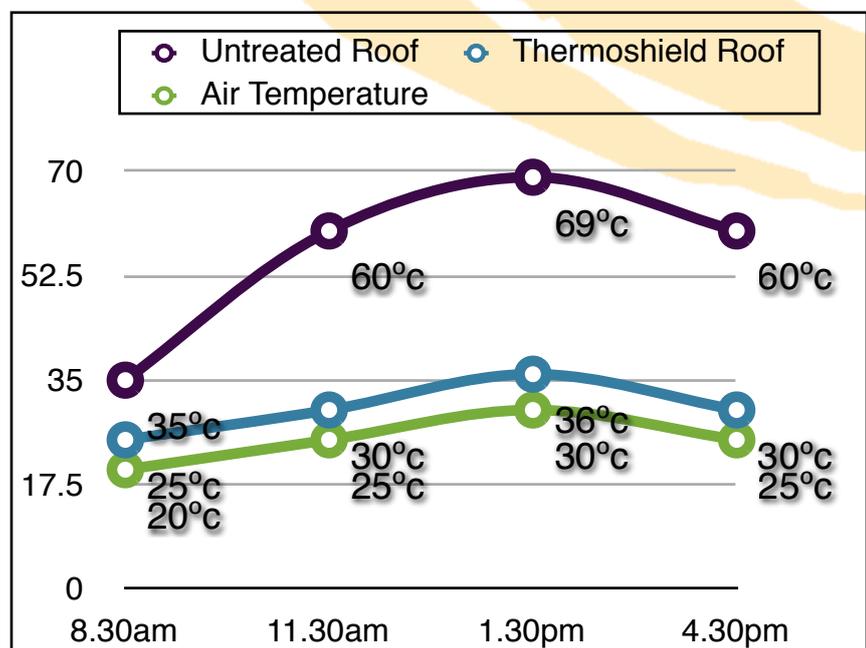


HOW THERMOSHIELD® WORKS !

Thermoshield® differ from other methods of insulation as it has a unique formula that takes advantage of the laws of Physics.

- Thermoshield® provides a durable thermal barrier. The insulating hollow ceramic beads incorporated in our formula behave much like glass, however much more effective.
- Thermoshield® dissipates heat. Within 10 seconds of heating the borosilicate ceramic beads with a blow torch, they can be handled safely with bare hands. This means that over 2000°C of heat has been dissipated in less than 10 seconds.
- The hollow ceramic microspheres reflective quality affects the warming phenomenon called “Mean Radiant Temperature”, where heat waves from a source such as direct sunlight cause a person to feel warmer even though the actual air temperature is no different between shade and sunny location. It is the molecular friction within the skin, which makes the body feel warmer in the presence of direct sunlight, the same with structural buildings, by using Thermoshield®, the thermostats can be set lower for the same degree of comfort, resulting in lesser energy consumption of the Air Conditioning system.

Ceramic is a poor conductor of heat and is far more effective than the bulky materials generally used for dissipating heat. The Thermoshield® Exterior / Roof system is unsurpassed in its ability to dissipate heat. It reflects most solar energy so it never gets into the structure to make heat a problem. Thermoshield® coatings reflect 83% of Solar light (Coatings reflect 85% of Infrared,, which is the region of the spectrum responsible for 90% of Solar heat). There is no heat storage build up as with the conventional bulk insulation.



Thermoshield® uses special Acrylic Elastomeric Resins, the resins are engineered to suspend the ceramic microspheres, providing excellent adhesion to most surfaces, excellent high tensile strength, waterproofing property, and withstands the most extreme weather conditions.

The most unique quality of Thermoshield® coatings is “Variable Permeability”, when conditions are wet, the resin polymers swell up, becoming completely water-tight. When conditions are dry, the pores open up, and trapped moisture can breathe out. This is very important feature, other paint products are water-tight all the time. Moisture will work up beneath the surface and become trapped under the waterproof material. When this moisture heats up, it turns water to vapor, expanding many times, causing blistering or destroying adhesion, or it freezes which also breaks down the adhesion, leading to paint failure.

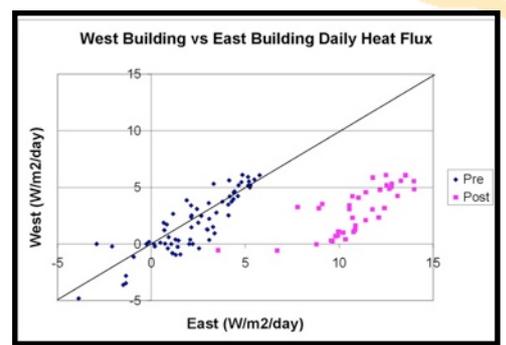
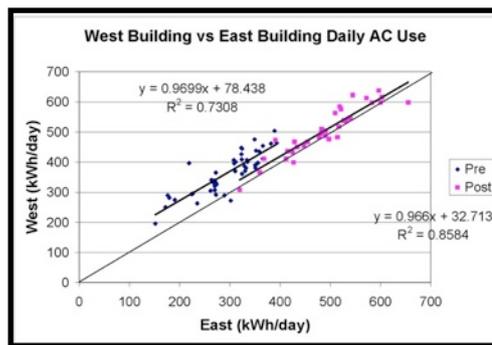
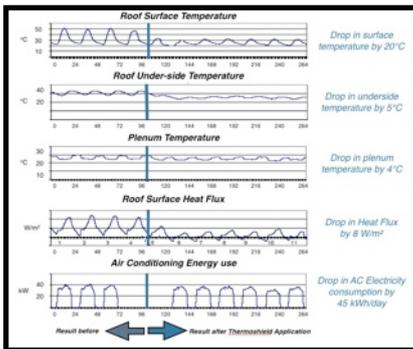
THERMOSHIELD

YOU CAN NOW SAVE UPTO 26% ON YOUR ENERGY BILLS !!!

Thermoshield® is a charter member of the Energy Star Program, our products were extensively tested and accredited as an Energy Star product, after a 3 year aging in tests done at Oak Ridge National Laboratories, one of the premiere testing Laboratories in the US, Thermoshield® Coatings were reducing the heat flux through the roof by 66% - the best of all the coatings tested.



An extensive test was conducted at Hyderabad by Lawrence Berkley National Laboratories of USA in association with USAID, two identical buildings at Satyam Learning Center which are centrally air conditioned were subjected to tests, of which one of the building's roof was coated with Thermoshield® Roof Coat. The data of the both the buildings were monitored continuously over a period of 3 years, the results were amazing !On an average we saw a drop in Air Conditioning Energy consumption by 45 kWh/day.



You can reduce heat flow? Here is an illustration of how Thermo-Shield® can reduce heat flow ($Q = \text{Temperature Differential in Fahrenheit} / \text{Insulation Thickness in inches} / \text{Insulation Conductivity}$) through a roof. Assume it is a hot summer day and the average temperature on a roof is 140F (60C); the roof has 2" foam insulation with a K factor of 0.16 and the inside temperature of the building is kept at 70F (21C) by the air-conditioning. The Heat Flow would be: $140F - 70F / 2'' / 0.16 \text{ WmK} = 70 / 12.5 = 5.6 \text{ BTU/ft}^2/\text{hr}$

Now we apply Thermo-Shield® on the roof dropping the surface temperature to 90F (32C). The new Heat Flow would be: $90F - 70F / 2'' / 0.16 \text{ WmK} = 20 / 12.5 = 1.6 \text{ BTU/ft}^2/\text{hr}$

A savings of 71%



THERMOSHIELD



THERMOSHIELD® PRODUCTS

Thermoshield® Roof Coat

Thermoshield® Exterior Coat

Thermoshield® Interior Coat

Thermoshield® Wood & Deck Coat

Thermoshield® Tank Shield

Thermoshield® Stucco

Thermoshield® Flex Tac 2





ThermoShield

ROOF COATING

DESCRIPTION

ThermoShield® Ceramic Roof Coating is a highly efficient, energy-saving, flexible coating with VOC levels of less than 1gm/L. It is filled with special ceramic micro spheres that act as a thermally efficient blanket covering the entire structure. This coating reduces heat penetration by keeping roof surfaces much cooler in hot summer weather. It can bridge hairline cracks, is completely washable and resists many harsh chemicals and maintenance foot traffic. It offers UV protection and greatly reduces thermal shock. ThermoShield® Roof Coating can also reduce noise transmission and has an effective use range from -40°C to 204°C.

USES

For improving Sustainability and Green Building design on many types of roofs (concrete, steel, and many others); it may be utilized wherever a weather resistant breathing membrane-like energy savings coating is required.

INSULATION

Reflectance 82% - Emittance 94% - Conductance 0.05 W/mK - Endothermic Effect® (evaporative cooling property) - Light Scattering (optical cooling property). Unlike typical mass insulation, which is designed to slow down heat conduction through the roof, this technology reduces the amount of heat development on the roof surface making any mass insulation system more effective and more sustainable.





EXTERIOR WALL COATING

DESCRIPTION

ThermoShield® Exterior Ceramic Wall Coating is a highly efficient, energy-saving, flexible coating, designed to insulate and waterproof exterior walls. It is non-toxic and has VOC less than 1g/L. This coating bridges hairline cracks, is washable, resists many harsh chemicals and dirt pick-up. ThermoShield® Exterior Wall Coating puts a stop to the "frequent painting cycle" by outlasting paints several times over and by retaining its color with aging. It is fire resistant and protects against UV, comes in a variety of architectural colors and leaves a beautiful matt finish.

USES

For improving Sustainability and Green Building design of exterior concrete, metal, wood, polymerized surfaces, and over types of exterior wall surfaces. To be used instead of paint where a fire and chemical resistant coating is required, where a coating with CO₂ diffusion and anti-electrostatic properties is needed, or where simply a long-lasting color-fading resistant coating is desired.

INSULATION

Reflectance 89% - Emittance 94% - Conductance 0.06 W/mK - Endothermic Effect® (evaporative cooling property) - Light Scattering (optical cooling property). Unlike typical mass insulation, which is designed to slow down heat conduction through the walls, this technology reduces the amount of heat development on the wall surface making any mass insulation system more effective and more sustainable.





THERMOSHIELD

INTERIOR WALL COATING

DESCRIPTION

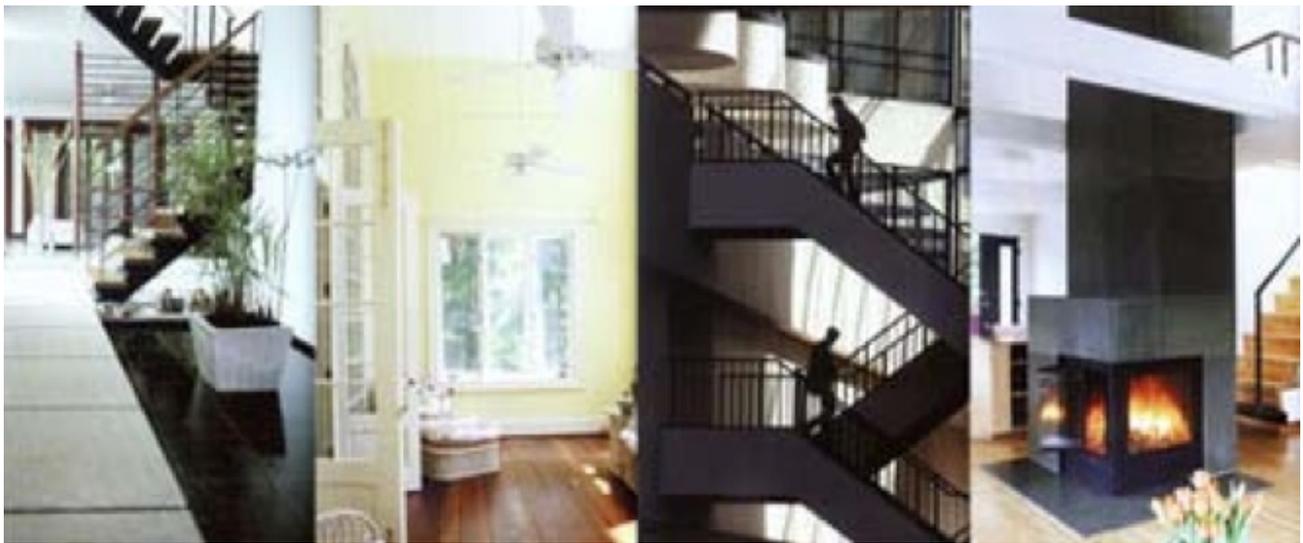
ThermoShield® Interior Wall Coating is a highly efficient, energy-saving, flexible coating, designed to maintain a more uniform temperature ceiling-to-floor and to reduce cold weather heat loss through walls and ceilings. It has VOC levels of less than 1g/L, is completely washable and resists many harsh chemicals and dirt pick-up. ThermoShield Interior is filled with special ceramic micro spheres that act as a thermally efficient blanket. This coating has 4 times the fire resistance and 1/26th the smoke development necessary to classify for Class I rating, a safety feature that makes it a first choice among decorative/protective coatings for indoor painting. It has superb adhesion and reduces sound transmission and echo; comes in a variety of architectural colors and leaves a beautiful matt finish.

USES

For indoor painting where a good fire-resistant coating is required. For improving Sustainability and Green Building design. For reducing room noise level. For reducing condensation build up.

INSULATION VALUES

Reflectivity 89% - Emittance 94% - Conductance 0.06 W/mK - Endothermic Effect® - Light Scattering





THERMOSHIELD

TANK SHIELD

DESCRIPTION

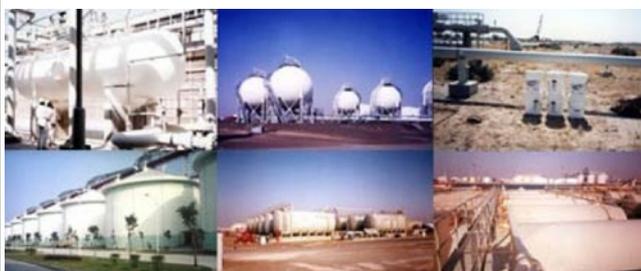
ThermoShield® Tank Shield is a one-compound highly efficient, energy-saving, flexible coating filled with special ceramic micro spheres. Each micro sphere acts as a sealed cell and the entire coating acts as a thermally efficient blanket covering the entire vessel. This coating is non-toxic and with VOC levels of less than 1g/L. It is washable, resists many harsh chemicals and is classified as fire resistant Class B I. It greatly reduces thermal shock and heat penetration by keeping surfaces much cooler in hot summer weather; it also offers UV protection. Tank Shield displays excellent dirt pick-up resistance and retains its flexibility after aging.

USES

Primarily used as an exterior coating for holding vessels to reduce surface temperature and loss of inventory. It is also used as a pipe coating for the same purpose.

INSULATION

- Reflectance 82% • Emittance 94% •
- Conductance 0.05 W/mk • Endothermic Effect® (evaporative cooling property) •
- Light Scattering (optical cooling property)



FLEX-TAC 2

DESCRIPTION

Thermoshield® Flex-Tac is a primer to be used over bitumen surfaces prior to the application of Thermoshield® Roof or Exterior Coats.

APPLICATION

Apply the Acrylic Flex-Tac by roller or airless spray on a clean surface at approximately 6.22 square meters per gallon in one coat application. Allow drying time for a minimum of 12 hours before the application of Thermoshield® Roof or Exterior coats. Do not apply in freezing weather or when precipitation is imminent.

CLEAN UP

Use soap and warm water to clean tools and equipment. Rinse with clean fresh water.

STORAGE AND PACKAGING

Product needs to be stored in a warehouse room at temperatures between 5°C - 30°C.



Bitumen Roof

Flex-Tac application



Finished roof after ThermoShield®



THERMOSHIELD

STUCCO BASE & STUCCO FINISH COAT

DESCRIPTION

Thermoshield® Stucco water based coatings can be applied in place of paint, and as an alternative to the conventional and often costly three and more part stucco systems. This unique wall coating applies quickly, is much less labor intensive and provides an effective and durable thermal barrier. The insulating hollow micro spheres incorporated in the finish and base coat formulas are reluctant to conducting heat, and refract as well as dissipate heat away from the coated surface. The formulas also incorporates 100% acrylic polymer resins that allows the transmission of water vapor to escape thus reducing moisture build-up in the wall assembly.

Components

Premixed base coat and premixed finish coat.

Uses

Thermoshield® Stucco Base and Finish Coatings are designed for Interior and Exterior wall surfaces as a flexible wall coating. They can be applied over dry wall, wood, steel, reinforced insulation board, brick, concrete block, concrete and over existing stucco. It is designed to go on ready to paint surfaces that meet local standards and building codes.

Colors Available

Many colors to choose from.

Application

Apply Thermoshield® Stucco Base coat on the entire clean dry surface. Prepare corners and joints with recommended corner bead, mesh and Thermoshield® Stucco Finish Coat, allow drying and then apply a coat of Finish coat to the entire structure.





THERMOSHIELD

WOOD & DECK COAT

DESCRIPTION

This water based sealer contains the finest resins available to provide long lasting finish, which outperform the conventional sealers.

Rain and sun, attack unprotected exterior wood surfaces resulting in costly damage to your wood surfaces. Water soaks deep into the exterior surfaces causing them to expand. The heat of the sun extracts moisture out of these surfaces leaving them dry and brittle. This on-going cycle of expansion and contraction causes wood to swell, crack and splinter.

BENEFITS

UV BLOCK

This sealer contains UV Block protection, a special additive designed to protect against the harmful rays of the sun.

MOISTURE RESISTANT

Wood and Deck Coat penetrated deep into the wood surfaces providing a clear finish that block water out and allows the surface to breathe.

BEAUTIFIES & ENHANCES

Thermoshield® Wood and Deck coat beautifies and enhances wood surfaces both old and new as it dries to a clear matte finish.

DEEP PENETRATING ACRYLIC LATEX RESINS

The resins in Thermoshield® Wood and Deck Coat penetrate deep into the wood fibers binding them together to give longer protection, it bonds old wood surfaces reducing splintering.

Thermoshield® Wood & Deck coat protects all types of wood from damaging water penetration, including pressure treated wood. Reduces splitting, swelling, warping, shrinking and grain rising caused by water damage. It helps resist graying and fading caused by exposure to the sun.





THE THERMOSHIELD

TESTING DETAILS

ROOF COATS

ASTM D412 TENSILE
 ASTM D746 BRITTLINESS
 ASTM D1308 CHEMICAL RESISTANCE
 ASTM E108 FIRE RESISTANCE
 ASTM D570 WATER ABSORPTION
 ASTM D1149 OZONE CRACKING
 ASTM D865 HOT AIR DETERIORATION
 ASTM D1653 VAPOR PERMEABILITY
 ASTM E96 PERMEABILITY
 ASTM E903 REFLECTANCE
 ASTM E1225 CONDUCTIVITY
 DIN EN13 300 COLOR PERFORMANCE
 DIN 52615 MOISTURE DIFFUSION
 DIN 50014-23/50-2 AND 53122T CO2
 DIFFUSION VOC LEVELS OF LESS THAN 1
 GRM/LT

TANK SHIELD

ASTM D412 TENSILE
 ASTM D746 BRITTLINESS
 ASTM D1308 CHEMICAL RESISTANCE
 ASTM E108 FIRE RESISTANCE
 ASTM D570 WATER ABSORPTION
 ASTM D1149 OZONE CRACKING
 ASTM D865 HOT AIR DETERIORATION
 ASTM D1653 VAPOR PERMEABILITY
 ASTM E96 PERMEABILITY
 ASTM E903 REFLECTANCE
 ASTM E1225 CONDUCTIVITY
 DIN EN13 300 COLOR PERFORMANCE
 DIN 52615 MOISTURE DIFFUSION
 DIN 50014-23/50-2 AND 53122T CO2
 DIFFUSION VOC LEVELS OF LESS THAN 1
 GRM/LT

INTERIOR WALL COAT

JIS A6909 ADHESION STRENGTH,
 WASHABILITY, STABILITY, WATERPROOFING
 AND RESISTANCE TO FIRE, IMPACT
 (SHOCK), ALKALINITY, WEATHER,
 CRACKING, AND TEMPERATURE CHANGES
 JIS R3106 REFLECTANCE
 ASTM E84 FIRE RESISTANCE (CLASS I)
 ASTM 1225 CONDUCTIVITY
 DIN 52615 MOISTURE DIFFUSION
 DIN 4102 FLAMMABILITY (B1) DIN 13 300
 COLOR PERFORMANCE VOC LEVELS OF
 LESS THAN 1 GRM/LT

EXTERIOR WALL COATS

ASTM D1308 CHEMICAL RESISTANCE
 ASTM 1225 CONDUCTIVITY
 DIN 52615 MOISTURE DIFFUSION
 DIN 4102 & 18180 FLAMMABILITY (B1)
 DIN 13 300 COLOR PERFORMANCE
 JIS A6909 ADHESION STRENGTH,
 WASHABILITY, STABILITY, WATERPROOFING
 AND RESISTANCE TO FIRE, IMPACT
 (SHOCK), ALKALINITY, WEATHER,
 CRACKING, AND TEMPERATURE CHANGES
 JIS R3106 REFLECTANCE
 DIN 50014-23/50-2 AND 53122T CO2
 DIFFUSION VOC LEVELS OF LESS THAN 1
 GRM/LT





THERMOSHIELD

WHY THERMOSHIELD INDIA PVT LTD ?

THERMOSHIELD INDIA PVT LTD - TIPL, managed and geared by a group of ecologically minded, young and dynamic entrepreneurs to offer solutions in Thermal Insulation, Eco Construction Consultancy, Waterproofing and Flooring Systems.

TIPL is the sole licensee for **SPM THERMOSHIELD, USA**, for all its products in India and Sri Lanka.

We serve our customers with some of the the world's leading products which are proven and accepted worldwide. We are a unique firm, specialized in serving Architects, Builders and Developers with permanent solutions for problems pertaining to their structures. We have the expertise and experience to systematically diagnose and provide solutions to the problems that your building may face.

The products which we are using are proven worldwide in all climatic conditions. Within the short period of time in India, we have successfully completed many prestigious projects. We at TIPL could achieve this with proven systems and working closely with some of the leading architects and builders in the country.

The Company has tremendous wealth of knowledge and expertise, underpinned by a powerful, efficient Technical team, capable of tackling the most challenging and prestigious projects.

Clients and the Designers enjoy all the benefits of a single point responsibility with no hassle over the contentious issue of liability in case of failures of entitling a waterproof / heat shielded structure, and TIPL is responsible for proving it.

TIPL has a strong presence in the Green Movement, being one of the founding members and active participants of the Indian Green Building Council, we are also members of the United States Green Building Council, Eco Housing and TERI.



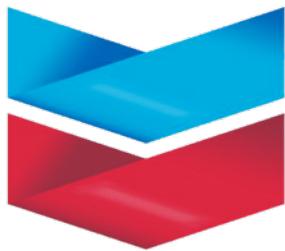
THERMOSHIELD

SOME OF THE INTERNATIONAL CLIENTS WHO ARE FAMILIAR WITH THERMOSHIELD®



TOYOTA

Chevron



 **HITACHI**

SONY



Mobil



A FEW OF OUR IMPORTANT CUSTOMERS IN INDIA

Infosys®



THE WORLD BANK



VOLTAS LIMITED

A **TATA** Enterprise

GRUNDFOS 

Standard Chartered 



TATA
TATA CONSULTANCY SERVICES

 **ICICI Bank**

FLSMIDTH


Aamby Valley City
life's finest abode

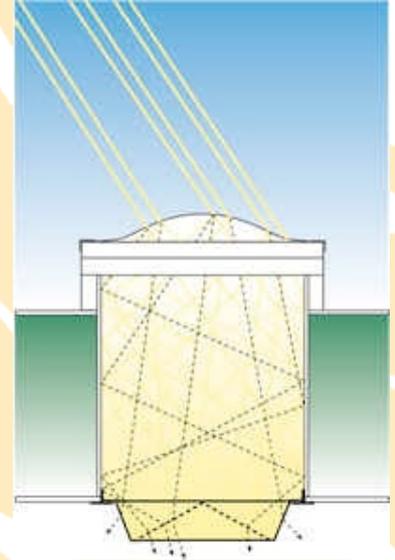


THERMOSHIELD

OTHER PRODUCTS & SERVICES OFFERED BY TIPL



-  *Natural Day lighting Systems*
-  *Waterproofing Solutions*
-  *Bamboo Flooring Systems*
-  *Exterior Emulsion*
-  *Interior Emulsion*
-  *Restoration Consultancy*
-  *Eco Construction Consultancy*



CONTACT US

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