RESSICHEM

adding life and value to your property

Building Insulation

ریسیکیم

مضبوطی اور پائیداری کے لئے

D-83, S.I.T.E., INDUSTRIAL AREA, MANGHOPIR ROAD, KARACHI - 75530, PAKISTAN

+92-21-32593800-02

WWW.RESSICHEM.COM

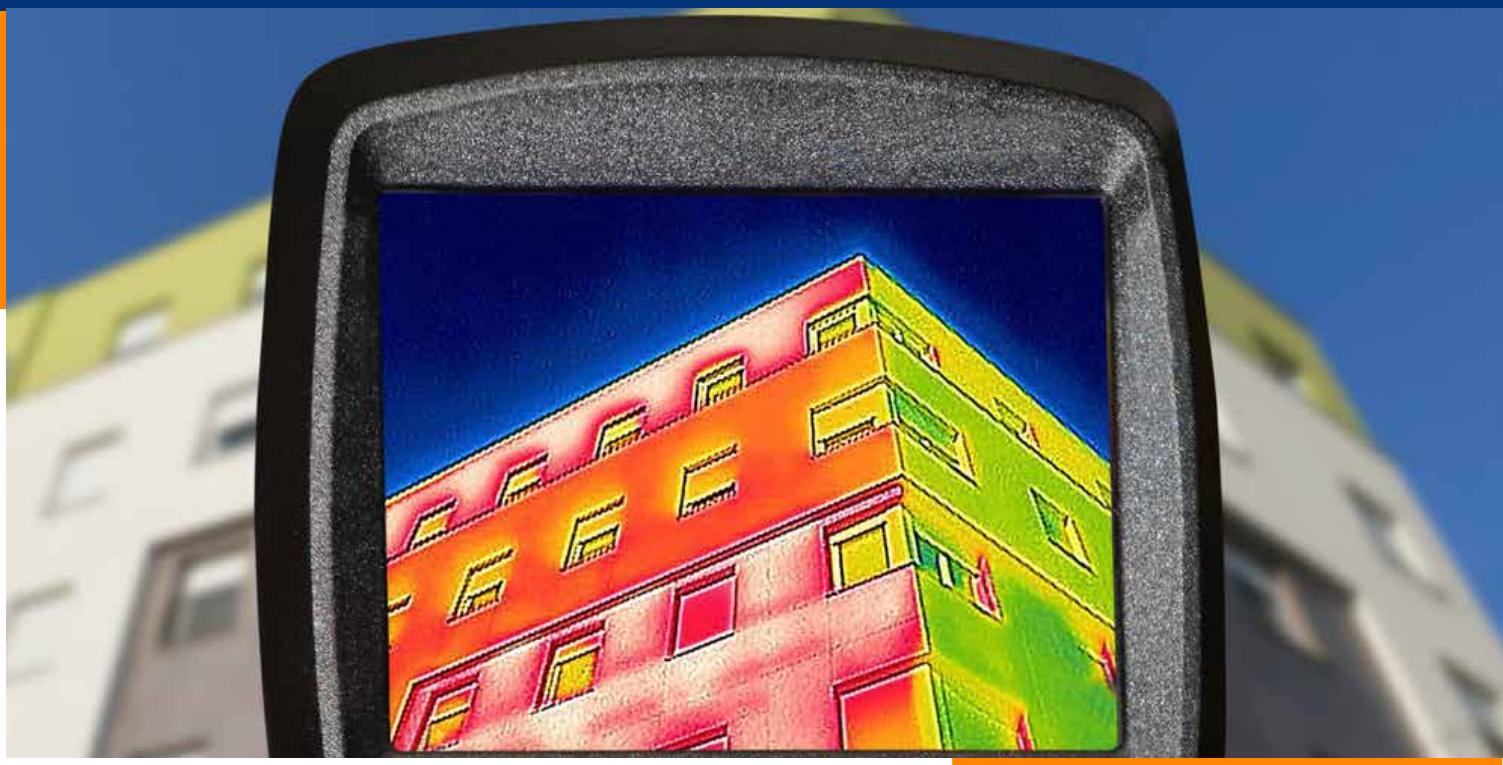
Who we are and what we do?

Ressichem was established in 1999, since its inception, we are proud to cater to the needs of the construction and many other industries offering quality products manufactured at our state-of-the-art plant sourced from the best in the world. Raw materials for our products are also sourced from quality suppliers worldwide. Ressichem takes pride presenting a variety of construction materials and systems which can cater to many needs of the construction industry.
They include:

- **Dry Mix Mortars / Premix Plasters**
- **Epoxy Floorings**
- **Building Care & Maintenance**
- **Epoxy Adhesives & Coatings**
- **Tiling & Grouting Materials**
- **Concrete & Mortar Admixtures**
- **Building Insulation**
- **Decorative Concrete**
- **Specialty Products**

Backed by a fully equipped laboratory at our own premises with a team of qualified engineers and chemists. Ressichem carries out regular tests to maintain quality of finished products for various construction & industrial applications. Vigorous onsite support & quality systems allow for maintaining the quality of our products, as well as solve construction and industrial problems. In our effort to maximize customer satisfaction, our technical personnel directly coordinate with customers to offer excellent services, product selections & even troubleshoot problems where needed.

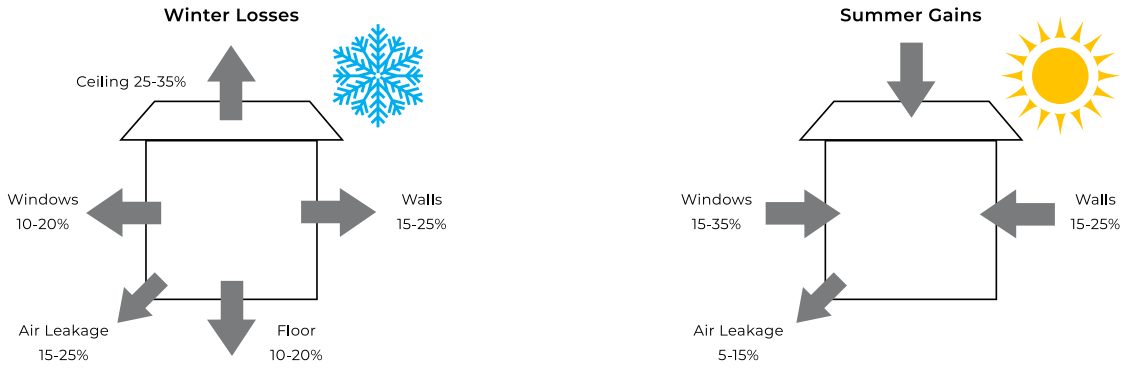
Operating on a customer first philosophy, Ressichem has carved its name in the ever-demanding needs of its industry, by offering world class services and fulfilling customer requirements via quality manufacturing and rigid quality control of products. We believe that the responsiveness and the priority we attach to the customer needs & their satisfaction has played a pivotal role in our phenomenal growth so far.



What is Building Insulation?

Insulation is the most effective way to improve the energy efficiency of a structure. Insulation of the building envelope helps keep heat in during the winter, but also lets' heat out and cooling inside the structure during summer. If a structure is properly insulated it can easily save up to 60 ~ 70% heating and cooling costs after installation.

An un-insulated structure is subject to considerable winter heat losses and summer heat gains.



All materials allow a measure of heat to pass through them. Some, such as metal, glass or air, allow heat to pass through more easily. Others, including animal fur or wool, thick clothing and still air, are much more resistant to heat flow, and are referred to as insulators. The term 'insulation' refers to materials which provide substantial resistance to heat flow. When these materials are installed in the ceiling, walls, and floors of a building, temperature flow into and out of the building is reduced, and the need for heating and cooling is minimized.

Although ceilings and walls may be insulated, heat loss will still occur in winter and cooling will be lost in summer if there are large areas of unprotected glass or through fixed wall vents and gaps and cracks around external doors and windows. Appropriate internal window coverings (e.g., lined drapes with pelmets) and draught proofing are vital to complement insulation. Insulation should always be coupled with appropriate shading of windows and adequate ventilation in summer.

Understanding Temperature Transfer

There are three ways in which heat is transferred, they are radiation, convection and conduction. A brief description of how these principles work are as follows.

Radiation

Radiation is the direct heat which can be sensed by the skin, such as the sun's rays or the heat from an open fire. Heat (infra-red) radiation, which is emitted from the surface of hot objects, travels in straight lines to cooler objects. With radiant heat transfer, heat is emitted from the warm plastered ceiling to cooler roof slab on a cold night.

Convection

Convection transfers heat through the movement of gases or liquids. For instance, when air is warmed, it rises and is replaced by cooler air. This creates a cycle or convection current capable of transferring heat. With convective heat transfer, the warm layer of air above the ceiling rises and comes into contact with the cold roof surface, cools by losing some heat to the roof material, then falls to the plaster where the process repeats itself.

Conduction

Conduction is heat transfer from warm to cooler areas within a material, or between two materials touching each other. Gases, such as air, do not conduct heat very well. Solids, particularly metal, conduct heat much more readily. With conductive heat transfer, heat inside the home warms the bottom layer of plaster ceiling which transfers heat to the next layer, and so on.

Insulation at Ressichem

At Ressichem we incorporate what is known as reflective insulation. It works by reducing the radiant heat transfer across an enclosed space. In the case of Ressichem it is by installing an insulated polystyrene sheets between the masonry unit and external render and applying foam concrete over the roof slab. Applying an expanded polystyrene sheet and foam concrete over the roof slab reflects the radiant heat away from the interior in summer.

The Insulation system at Ressichem is complete and requires only the provision of a concrete, masonry, or plastered / rendered surface on site. The Insulation system proposed by Ressichem can easily be installed, is far more durable than many other systems and provides a lot more insulation in a lot less space compared to the double wall sandwich practice.

At Ressichem our insulation systems are divided into two distinct categories of Wall and Roof insulation. With the application of a complete system, a Saving of more than 60% cost in heating and cooling can be achieved.

Advantages of Ressichem Insulation Systems

- Comfort is improved year-round.
- It reduces the cost of heating and cooling by over 60 %
- It pays for itself in around five to six years.
- There is less need for heating and cooling which saves non-renewable resources and reduces greenhouse gas emissions.
- It virtually eliminates condensation on walls and ceilings.
- Some insulation materials can also be used for sound proofing.

Range of Insulation Products at Ressichem

Product	Description	Packaging
Ressi PlastoRend 120 L Ready to use premix, lightweight, fire retardant, insulation plaster	**Ressi PlastoRend 120 L** is a dry premix cement-based plaster for internal/external application to provide thermal insulation of walls. It is an ideal substrate to receive subsequent coats such as decorative plasters and paints.	Ressi PlastoRend 120 L is Packaged in **20 KG** bags.
RESSI INSUFIX 200 High strength adhesive for fixing expanded polystyrene insulation sheets over masonry & concrete surfaces	**Ressi Insufix 200** is an adhesive mortar for fixing expanded polystyrene (EPS) insulation boards to cementitious substrates. Ressi Insufix is also used for the creation of reinforcing layers incorporating glass-fiber mesh applied onto **Ressi Insufix 200** or Standard EPS insulation sheets, and other solid, sound substrates, e.g., concrete, blocks, bricks, plasters and renders etc.	Ressi Insufix 200 is packed in **20 KG** and **50 KG** Bags.
RESSI FOAM CRETE System of producing High Strength Foam like Matrix out of ordinary Portland Cement	**Ressi Foam Crete** is a system of adding a foaming agent to ordinary Portland cement to increase volume and raising the floor level of the RCC slab. This system is extremely useful for lightweight floor raising applications and roof insulation systems.	It is an onsite system where proper equipment and foaming agent is mobilised on site to execute the foam concrete process using only ordinary portlant cement.
INSULASTER INSULATION AND FLAME RETARDANT PREMIX PLASTER	**Insulaster** is a ready to use plaster made of inorganic substances providing your house and buildings with thermal, fire and acoustic insulation together. The plaster can be applied on both interior and exterior surfaces of old and new buildings allowing them to breathe.	**Ressi Insufix 200** is Packed in **20 KG** and **50 KG** Bags.
HEAT GUARD 1000 HIGH HEAT REFLECTIVE WATERPROOF COATING	**Heat Guard 1000** is a single component high heat resistant reflective and water proof coating which has been designed to dissipate and reflect solar radiation by providing a protective coating.	**Heat Guard 1000** is Packed in **15 KG** and **20 KG** Buckets.

Systems for Roof Insulation System using EPS Sheets

STEP 1

Water Proofing of RCC concrete using **Water Guard 491.**

STEP 2

Flood Test of RCC Slab.

STEP 3

Floor screed with the addition of **Ressi SBR 5850** and **Silmix** to make the slab level.

STEP 4

Application of EPS sheets using **Ressi Insufix 200.**

STEP 5

Application of metal mesh over the EPS surface.

STEP 6

Application of screed with the addition of **Ressi SBR 5850** and **Silmix.**

STEP 7

Chamfer making with the addition of **Ressi SBR 5850** and **Silmix** in the mortar mix.

Systems for Roof Insulation System using Foam Crete

STEP 1

Water Proofing of RCC concrete using **Water Guard 491.**

STEP 2

Flood Test of RCC Slab.

STEP 3

Application of **Ressi Foam Crete.**

STEP 4

Application of Screed with the addition of **Ressi SBR 5850** and Silmix.

STEP 5

Chamfer making with the addition of **Ressi SBR 5850** and **Silmix** in the mortar mix.

Systems for Roof Insulation System using Heat Reflective Coating of Heat Guard 1000

STEP 1

Chamfer making between the roof screed & parapet walls with the addition of **Ressi SBR 5850** & **Silmix.**

STEP 2

Application of **Heat Guard 1,000.**

Systems for Roof Insulation System using EPS Sheets, Foam Crete and Heat Reflective Coating

STEP 1

Water Proofing of RCC concrete using **Water Guard 491.**

STEP 2

Flood Test of RCC Slab.

STEP 3

Application of **Ressi Foam Crete.**

STEP 4

Application of EPS sheets using **Ressi Insufix 200.**

STEP 5

Application of metal mesh over the EPS surface.

STEP 6

Application of screed with the addition of **Ressi SBR 5850** and **Silmix.**

STEP 7

Chamfer making between the roof screed & parapet walls with the addition of **Ressi SBR 5850** & **Silmix.**

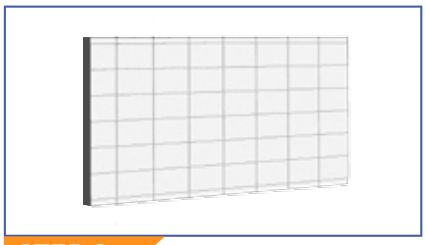
STEP 8

Application of **Heat Guard 1,000.**

Systems for Wall Insulation System using EPS Sheets (EIFS)

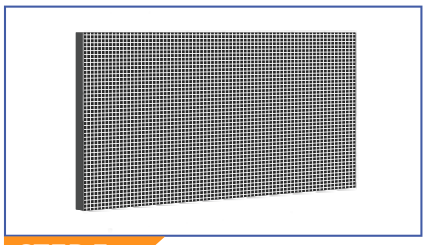
STEP 1

Application of Base Plaster of **Ressi Plastorend 120** over Masonry Surface



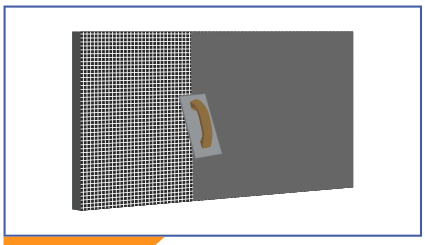
STEP 2

Application of **EPS Sheet** over base plastered surface with the use of **Ressi Insufix 200.**



STEP 3

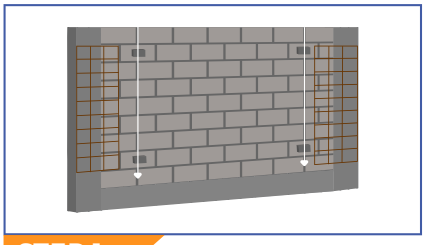
Application of **Fiber Glass Mesh** over the EPS Board using **Ressi Insufix 200.**



STEP 4

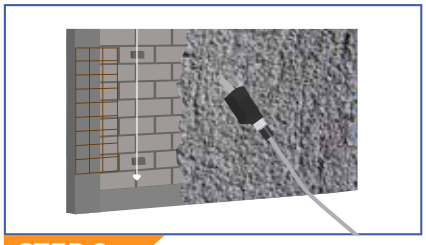
Finishing the surface.

Systems for Wall Insulation System using Insulation Plaster



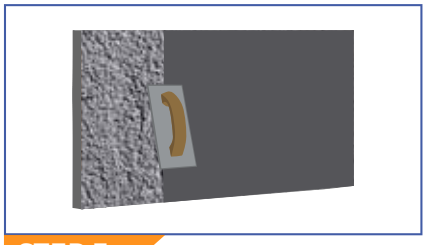
STEP 1

Surface preparation with metal mesh between the joints of concrete and masonry and application of leveling dabs.



STEP 2

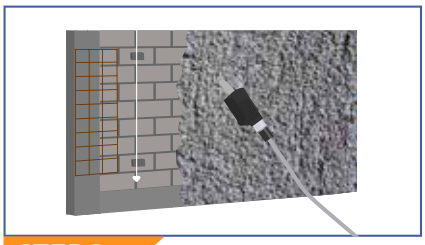
Application of **Insulaster** over the masonry surface.



STEP 3

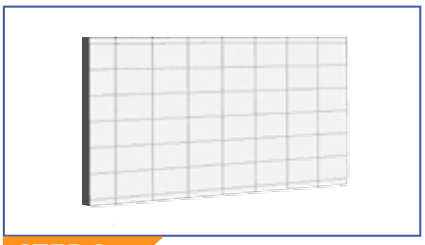
Finishing the surface as required.

Systems for Wall Insulation System using EPS Sheets (EIFS)



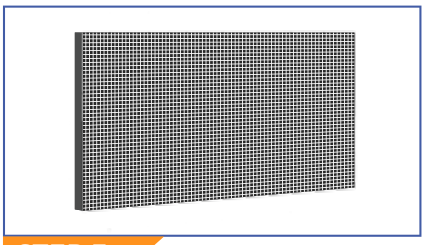
STEP 1

Application of **Insulaster** over the masonry surface.



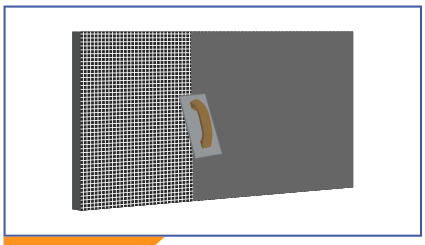
STEP 2

Application of **EPS Sheet** over base plastered surface with the use of **Ressi Insufix 200.**



STEP 3

Application of **Fiber Glass Mesh** over the EPS Board using **Ressi Insufix 200.**



STEP 4

Finishing the surface.

Notes

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D-83, S.I.T.E., Industrial Area, Manghopir Road,
Karachi - 75530, Pakistan

www.ressichem.com info@ressichem.com

+92-21-32593800-02 | +92-309-7772464

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