Ready for innovation

KOFATERM

THERMOREFLECTIVE PAINTS and MASSES

MODERNITET-GRUPPEN

Table of content

PAINT

INSIDE

page – 12

MASS

INSIDE

page – 15

PAINT

OUTSIDE

page – 13

MASS

OUTSIDE

page – 16

PAINT

ROOF

page – 14

MASS

ROOF

About us

Modernitet is a team of young, experienced people associated with modern technologies in construction. We are the representative of KOFARB products on the Danish market.

Qualified staff, modern machinery and specialized laboratories have ensured the company's success in the form of high quality products and recognition among customers.

For more than a dozen years, the company has been researching modern solutions to reduce the carbon footprint of products, both at the production stage and during their operation. This is how the modern **KOFATERM** thermoreflective coatings were developed, which are designed to save the energy needed to ensure thermal comfort in buildings.

Our motto is quality, modernity and ecology, so our products find more and more satisfied customers.

We invite you to cooperate with us.
Modernitet Team

ENERGY SAVING 40%

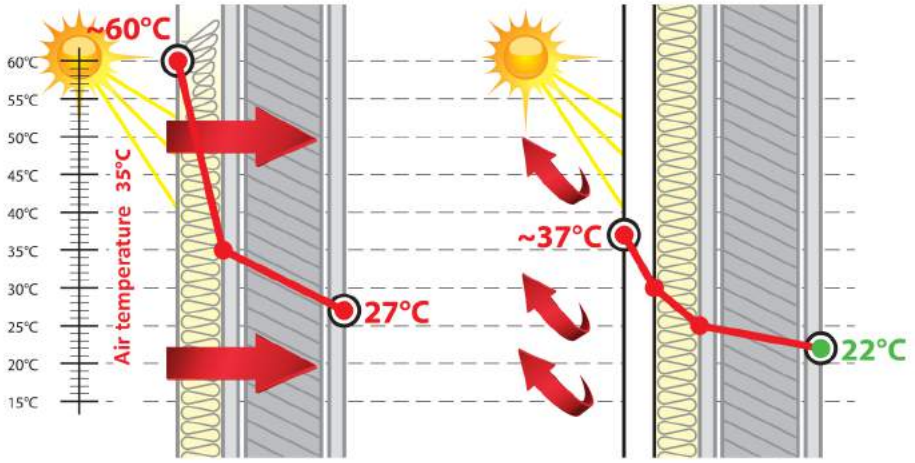
THANKS TO KOFATERM

What is Kofaterm?

KOFATERM is, in short, water-soluble paints and masses giving thermo-reflective coatings that save up to 40% of energy in both cold and hot climates. These products contain densely packed polymer microspheres in their structure, which reflect over 90% of energy electromagnetic waves in the full spectrum of light visible, including infrared (thermal-IR) energy. These waves want to penetrate the partition, that is, the wall or roof, try to disperse in it to finally penetrate to its other side, but they are prevented by the shells **KOFATERM**, which reflect them from the surface.

OPERATION IN THE HOT CLIMATE

In hot climates, the main source of heat is the sun, which can heat the surface of the facade and roof up to 80°C. Prolonged exposure of such temperatures causes excess heat to penetrate the partition, as a result of which it as a result of which it loses its insulating efficiency. It should also be noted that some thermal insulation materials, as a result of such processes, undergo permanent degradation and irreversibly lose their thermal resistance properties. Heat, which penetrates such a partition, dissipates in it and penetrates into the room. To reduce the excessively high internal temperature, the use of air conditioners, which consume the greater the amount of energy, the lower the thermal resistance of the thermal resistance of the partition. Wanting to reduce the energy demand for the air conditioner, and at the same time maintain the same temperature inside, it is enough from the outside to **KOFATERM** coating from the outside. Such a solution causes the external surface of the partition to have a temperature close to the ambient temperature ambient temperature and even with prolonged exposure to the sun does not heat up.

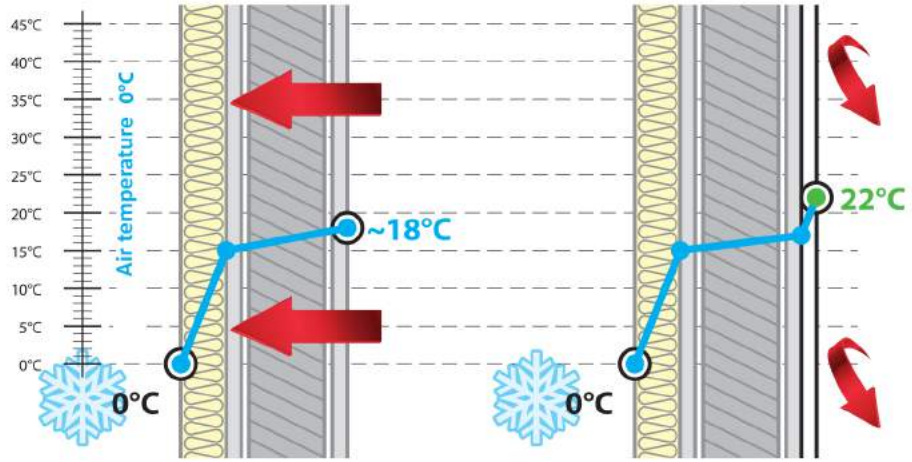


No thermoreflective coating *With **KOFATERM OUTSIDE** thermoreflective coating*

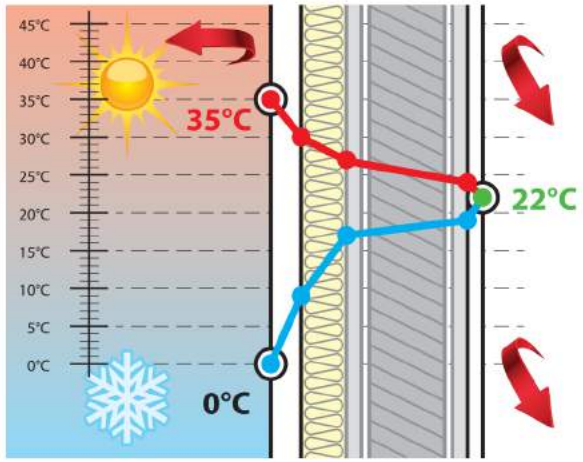
OPERATION IN THE HOT CLIMATE

In cold climates, the use of **KOFATERM** coatings indoors causes the energy of heat waves to be reflected, with the reflection occurring from the surface of the interior walls. Then the heat inside the room stays inside, does not penetrate the partition and does not escape outside.

Thus, the energy demand for heating a room is significantly reduced. Depending on the thermal insulation materials used to date, up to 40% of heating energy can be saved as a result of such thermo-modernization. The effectiveness of this type of solution can best be seen in thermal imaging camera photos taken before and after the application of **KOFATERM** coatings.



No thermoreflective coating *With **KOFATERM INSIDE** thermoreflective coating*

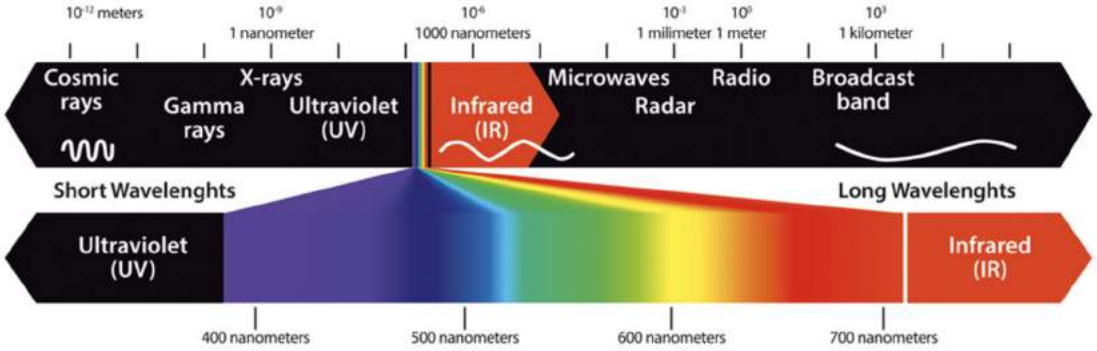


*With **KOFATERM OUTSIDE** and **INSIDE** thermoreflective coating*

Illustrative drawings of thermal energy flow through a partition in a climate hot and cold

WHAT ARE POLYMER MICROSPHERES?

Microspheres are small spheres filled internally with air, which, together with a polymer coating, exhibit very good thermal insulation properties. The near-perfect sphericity of microspheres resulting from their manufacturing technology and the high transparency of the coating mean that IR light and heat energy entering such a sphere, as a result of its multiple internal reflections, returns toward the radiation source. The content of microspheres in the coating and their sizes are very meticulously selected depending on its purpose so that their efficiency is as high as possible. Coatings containing microspheres eliminate the phenomena of local condensation, the so-called thermal bridges (in corners, triangles, joints, etc.), which often appear in closed spaces. **KOFATERM** coatings are characterized by high adhesion (adhesion) to almost all substrates, high flexibility and resistance to abrasion. Due to the properties of eliminating thermal bridges and condensation there, they prevent the development of mold, algae and algae on the surface.



KOFATERM coatings are an excellent thermal retrofit material, allowing great savings with thin-layer, low-cost and very easy application. These are modern paint products with thixotropic properties, which are characterized by low resistance to tools during work, which translates into less effort for the painter during their application. They are ideal for single-family housing, industrial buildings, hospitals, public buildings, livestock buildings and anywhere you want to insulate and direct heat transfer.

KOFATERM AND ECOLOGY

KOFATERM is a high-tech coating with a targeted formulation, the essence of which is environmental friendliness and the lowest possible carbon footprint. This is not only a 40% reduction in energy demand and associated savings, but also 40% lower carbon dioxide emissions into the atmosphere, 40% lower heat emitted by heating and cooling equipment, and 40% less volatile dust and pollutants in the air. Most importantly, these are long-term effects, as coatings do not lose their efficiency over time and do not require renovation more often than the standard solutions used to date.

It should also be noted that the paints and compounds are based on water-based polymer dispersions and mineral fillers. They are characterized by a very low content of organic volatile compounds, the total amount of which does not exceed 5.6 g/dm³ VOC. Such a low VOC limit reduces the risk of negative impacts on the environment and on health and well-being. In addition, **KOFATERM** coatings are free of substances and mixtures classified as toxic, hazardous to the environment and humans. They are water-based products, so they do not require the use of chemical solvents for cleaning tools, as ordinary water is sufficient for this purpose. Thus, no harmful substances enter the soil and surface water. Moreover, the products are sold in packaging that is fully recyclable. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Quis ipsum suspendisse ultrices gravida. Risus commodo viverra maecenas accumsan lacus vel facilisis.

As you can easily see, **KOFATERM** paint products are ideal renovation solutions that improve the comfort of life while taking care of nature and the future of our planet.

INDOOR APPLICATION, OUTSIDE AND ON THE ROOF

Both coatings of paint and **KOFATERM** masses result in a thermal insulation effect based on thermoreflective properties. This works by reflecting the energies of heat waves, allowing us to achieve energy savings of up to 40%. However, it should be kept in mind that each of these products operates in a different range of the electromagnetic wave spectrum, and to ensure maximum efficiency, they must be used as intended.

INSIDE (KOFATERM INSIDE)

To properly understand the principle of **KOFATERM INSIDE** coatings, it is necessary to pay attention to two negative physical phenomena that have a direct impact on the loss of energy used to heat the room.

The first phenomenon relates to the properties of building partitions, which, having a certain thermal resistance, allow the energy of heat waves to penetrate their structure, as well as its penetration and escape to the outside (heat always penetrates from places of higher to places of lower temperature). This results in measurable energy losses, which can be seen in thermal imaging camera images.

The second phenomenon relates to the sensation of thermal comfort and is related to the exchange of heat indoors, where heat moves in two ways: from the heat source (radiator) vertically (convection) and from the heat source in all directions in the form of thermal radiation, including horizontally. In the vertical, it is the movement of heat toward the ceiling, where it is always warmest, while at the floor, where the temperature is lowest, the so-called "cold feet feeling" appears. Horizontally, it is the movement of heat in the direction from the heat source to the farthest points in the room, so the farther away from the heat source, the colder it gets. Until now, the only way to improve the sensation of thermal comfort was to raise the temperature of the radiator, with the consequence of increasing energy demand.

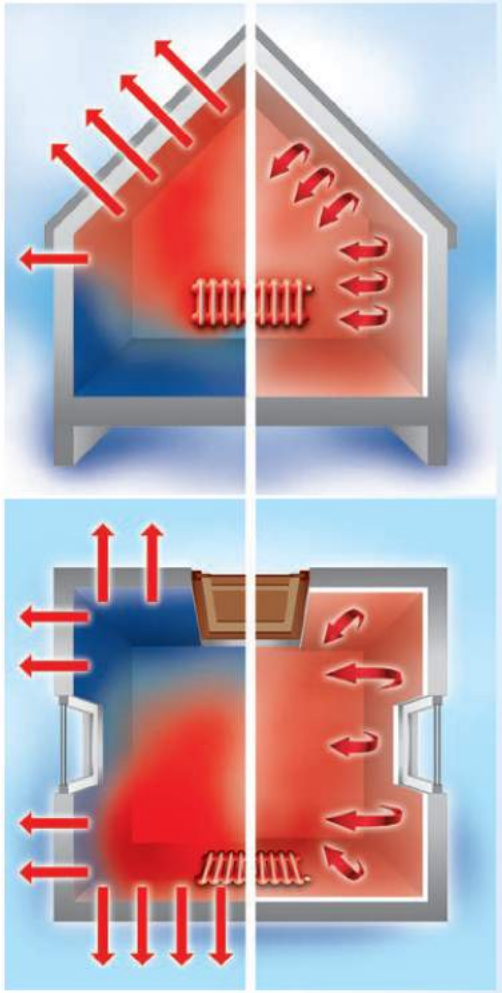
In the first case, the **KOFATERM INSIDE** coating behaves on the wall like a mirror for heat waves, where the heat practically no longer penetrates the partition (wall, ceiling) and 90% is returned to the room.

In the second case, **KOFATERM INSIDE** changes the sensation of thermal comfort, because the heat waves reflected from the coating equalize the temperature at every point in the room and cause temperature differences not to exceed 1-2°C.

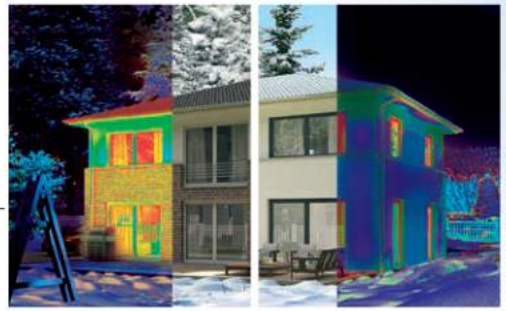
It should also be noted that **KOFATERM INSIDE** coatings have very low water permeability and low water absorption, while they show high water vapor permeability. They are said to be hydrophobic and breathable, which contributes significantly to the drying of the building envelope (wall) in case of accidental moisture, which increases its thermal resistance.

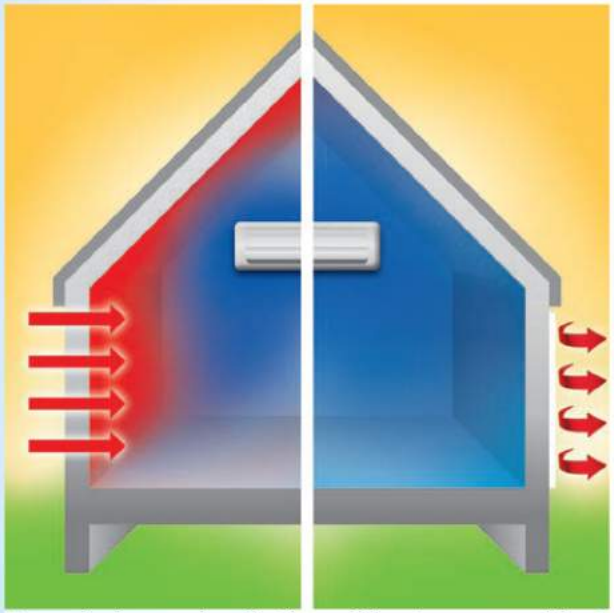
In summary, **KOFATERM INSIDE** products eliminate the effects of both of the above-mentioned undesirable physical phenomena to the highest degree. Using them raises the temperature inside the room by about 7°C without having to raise the temperature of the heat source (such as a radiator), and this in turn reduces the need for heating energy, which translates into savings of up to 40%.

Transmission and reflection of thermal waves without coating and with thermo-reflective coating ***KOFATERM INSIDE***



Transmission and reflection of thermal waves without coating and with thermo-reflective coating ***KOFATERM INSIDE***





*Transmission and reflection of heat waves without coating and with **KOFATERM OUTSIDE** thermo-reflective coating*

*An overview of thermal imaging of a building without coating and with thermoreflective coating **KOFATERM OUTSIDE** and **KOFATERM ROOF***

OUTSIDE (KOFATERM OUTSIDE)

To properly understand the operation of **KOFATERM OUTSIDE**, it is necessary to recall what physical phenomena act on the exterior wall and how energy can be saved.

The first phenomenon occurs in hot climates or during hot periods in temperate climates, where the exterior wall surfaces are heated by solar energy, coming to us in the form of electromagnetic waves in the full range of the visible spectrum, including IR heat waves. On a sunny day, when the air temperature is, for example 35°C, the wall surface temperature can reach up to 60-70°C. Thermal energy from the surface of such a heated wall penetrates into its depths and after time penetrates into the interior of the building. Wanting to reduce the temperature inside you need to use an air conditioner, which involves the need for electricity. The lower the thermal resistance of such a wall, the more energy the air conditioner needs to cool the room. It should also be noted that the wall, constantly heated by high temperatures from the sun, begins to behave like an accumulator: it collects and stores heat energy, which even in the evening, when it is already cool outside, continues to give off heat and warm up the interior. Thus, the air conditioner works not only during the day at the highest efficiency level and thus consumes large amounts of energy, but also in the evening and at night.

The second phenomenon occurs mainly in temperate climates, where during wet seasons the wall absorbs water from precipitation and from the air. This water penetrates the partition and lowers its thermal resistance, and this results in an increased demand for thermal energy during the heating season, with measurable losses.

KOFATERM OUTSIDE coatings eliminate both of the undesirable phenomena described above. First, thanks to the thermoreflection effect, they reflect more than 90% of the energy of electromagnetic waves associated with the heating of the wall surface, resulting in a wall temperature higher than the air temperature by only a few degrees. The aforementioned outer wall then has less than 40°C on its surface, rather than 60-70°C, which means the air conditioner uses less energy.

In the second case, concerning moisture in the wall, **KOFATERM OUTSIDE** coatings protect the wall from moisture penetration, while ensuring that water vapor is freely permeable through diffusion. This means that not only does water not penetrate the partition, but the moisture that was previously in the wall can escape freely from it, and a dry partition means increased thermal resistance and reduced thermal energy consumption.

In conclusion, **KOFATERM OUTSIDE** work not only in hot climates, giving energy savings of up to 40%, but also in moderate climates by protecting and preserving the wall from the outside give measurable savings also in the heating period.

ON THE ROOF (KOFATERM ROOF)

To get a good understanding of how **KOFATERM ROOF** coatings work, it is necessary to pay attention to the physical phenomena that affect the roof surface and are the cause of energy loss and the reason for the degradation of the thermal insulation materials of the partition.

The first problem occurs in hot climates or during hot periods in moderate climates, where the roof surface is exposed to intense solar energy that arrives in the form of electromagnetic waves, including IR heat waves. For this reason, on a sunny day when the air temperature is, for example 35°C, the surface temperature of the roof, which is heated throughout the day, can reach up to 80°C. The heat energy accumulated in this way from the heated surface penetrates deep into the partition, which is the roof, and after time penetrates into the interior of the building. Reducing the resulting too high interior temperature requires the use of an air conditioner, which involves the consumption of electricity. The lower the thermal resistance of the roof envelope, the more energy the air conditioner needs to cool the room. In addition, a roof that is constantly exposed to the sun heats up and stores energy in the form of heat. As a result, even in the evening, when it is already cool outside, the accumulated heat in the baffle further heats up the interior. Then the air conditioner operates at high efficiency not only during the day, consuming large amounts of energy, but also in the evening and at night.

The second problem concerns the insulating materials inside the roof envelope, which, when exposed to high temperatures, lose their thermal resistance, or insulating efficiency.

It should be noted here that some thermal insulation materials, as a result of such action, are permanently degraded and irreversibly lose their insulating properties. The effect is that the partition may have a reduced thermal resistance reaching up to 50% of its initial value, and consequently the energy demand for cooling in summer and energy for heating in winter will increase significantly.

For both of the unwanted phenomena described above, an excellent and easy-to-apply solution is **KOFATERM ROOF** thermo-reflective coatings, which reflect more than 90% of the energy of thermal waves. The roof then does not become heated for a long period of time, because as a result of thermoreflection the temperature on its surface is close to the surrounding temperature. In this way, the reduced roof surface temperature causes less thermal energy to penetrate the roof envelope, and thus the energy entering the interior reaches low values or is close to zero. In addition, thanks to the reduced temperature on the roof surface, the thermal insulation materials inside the partition do not lose their properties, do not degrade over time and retain their thermal insulation efficiency for a long period.

As you can easily see, **KOFATERM ROOF** coatings not only reduce the energy demand in summer by up to 40%, but also protect the thermal insulation materials inside the envelope, whose proper thermal resistance and efficiency give measurable savings in winter. In addition, **KOFATERM ROOF** coatings eliminate micro-cracks on the roof surface, and even, like **KOFATERM ROOF MASS**, perfectly seal it and soundproof it during precipitation.

*Transmission and reflection of heat waves without coating and with thermoreflective coating **KOFATERM ROOF***

Properties of paints and masses

KOFATERM coatings products, regardless of the application, are found in two groups as: paints and masses.

PAINTS

The paints allow easy application, the same as traditional water-based dispersion (emulsion) paints, that is, by brush, roller or spray. When forming coats of **KOFATERM PAINT**, the paint should be applied 2-3 times so that the final film thickness is 0.4-0.5 mm. Maintaining such a thickness of the coating is necessary to obtain maximum thermoreflective properties and to maintain their full efficiency.

Products in the form of paint are the easiest, simplest and most widespread way to apply **KOFATERM** products. They have valuable properties, such as very low resistance to tool movement during painting, but also do not drip or sediment during storage and transport. Depending on your needs, the paint gives you the opportunity to modify it and to a certain extent you can change its viscosity, spreadability and extend the so-called open time by adding a small amount of water (but no more than 5 parts by volume of water per 100 parts by volume of paint).

KOFATERM PAINT paints have a precisely composed formula and, apart from the previously mentioned water, no other additives are allowed. Their high adhesion guarantees adhesion to any degreased, vacuumed and chemically inactive surface. The exceptions are bituminous surfaces and never-before-painted wall surfaces, which require priming with a dedicated primer before painting with **KOFATERM** products.

The efficiency is about 1 liter per 2 m^2.

MASSES

KOFATERM MASS water-based dispersion masses, due to their high viscosity (compact consistency), require a different application than liquid paints. They can be applied easily with a trowel for smoothing gypsum walls, with a roller for structural plaster and by spraying with aggregates for structural plaster. The undoubted advantage of the masses is the possibility of a single application, but it should be remembered that the thickness of the applied coating should not be less than 0.8-1.2 mm.

In addition to the thermo-reflective properties, such as in **KOFATERM PAINT**, coatings made from the masses have additional, very important features that show their greater comprehensiveness. First of all, compared to paints, they have higher elasticity, thanks to which they eliminate stubborn micro-cracks on the surfaces of walls and roofs, or, as in the case of **KOFATERM ROOF MASS**, they perfectly seal the surfaces of the roof. Other additional features include such properties as acoustic soundproofing and the ability to create decorative structures, including textures of structural plaster. The use of mass also increases the thermal resistance of the partition and improves its thermal insulation. As in the case of paints, masses offer the possibility of modification, and to a certain extent it is possible to change their viscosity, spreadability and extend the so-called open time by adding no more than 5 parts by volume of water per 100 parts by volume of mass.

The masses have a precise and tamper-sensitive formula, so other chemicals and minerals must not be introduced. Like paints, they have very good adhesion to virtually all surfaces that have been degreased, vacuumed and are chemically inactive. They require the use of **BITUM PRIMER** on bituminous surfaces and **UNIVERSAL PRIMER** on previously unpainted walls or when one is unsure about the durability of an old coating.

The efficiency is about 1 liter per 1 m^2

TABLE OF KOFATERM COATINGS PROPERTIES

PROPERTY/PRODUCT	KOFATERM INSIDE PAINT	KOFATERM OUTSIDE PAINT	KOFATERM ROOF PAINT	KOFATERM INSIDE MASS	KOFATERM OUTSIDE MASS	KOFATERM ROOF MASS
Water vapor permeability	***	**	*	**	**	*
Hydrophobicity	*	**	***	**	***	***
Abrasion resistance	**	***	***	**	***	***
Elimination of micro-cracks	*	**	**	***	***	***
Elimination of thermal bridges	**	**	**	***	***	***
Sound insulation	-	-	-	**	**	***
Surface sealing	*	**	**	*	**	***
Number of applications	3	3	3	1	1	1
Coating thickness	0.5 mm	0.5 mm	0.5 mm	1 mm	1 mm	1 mm
Efficiency	0.5 L/m^2	0.5 L/m^2	0.5 L/m^2	1 L/m^2	1 L/m^2	1 L/m^2
VOC	5.5 g/dm^3	5.4 g/dm^3	5.3 g/dm^3	5.5 g/dm^3	5.5 g/dm^3	5.5 g/dm^3

Kofaterm product range

KOFATERM INSIDE PAINT

KOFATERM INSIDE PAINT is a thermo-reflective interior paint. Its main task is to reflect more than 90% of heat waves from the walls, improve the convection of air masses inside the room and favorably change the feeling of thermal comfort. The application of **KOFATERM INSIDE PAINT** raises the temperature inside by about 4-5°C without the need to raise the temperature of the heat source (such as a radiator), and this in turn reduces the need for heating energy, which translates into savings of up to 40%.

In addition, the coatings are characterized by good vapor permeability, which has a direct effect on drying the wall and increasing its thermal resistance. In addition, the coating largely eliminates micro-cracks on the surface of the wall, thermal bridges, and thus prevents condensation and prevents the formation of mold, algae and fungus.

The paints are easily applied in the same way as traditional emulsion paints, i.e. by brush, roller or spray. When forming coats of **KOFATERM PAINT**, the paint should be applied 2 to 3 times so that the final film thickness is 0.4-0.5 mm. The use of such thickness is necessary to obtain maximum thermoreflective properties and to maintain their full efficiency. High adhesion provides very good bonding to all concrete, gypsum and wood surfaces.

Due to its properties, it can be used in residential houses, blocks of flats, hospitals, hotels, administrative offices, business halls, garages, food industry, animal husbandry, etc. **KOFATERM INSIDE PAINT** is a unique material that allows thermal modernization of historic buildings under conservation protection. It is possible to color it with pigments for emulsion paints. It is resistant to UV radiation.

KOFATERM OUTSIDE PAINT

KOFATERM OUTSIDE PAINT is a thermo-reflective paint for use on building facades. The main task of this coating is to reflect more than 90% of the energy of electromagnetic waves coming from the sun and causing heating of wall surfaces. The use of the paint reduces the temperature of the facade, which is only a few degrees higher than the air temperature, as a result of which the amount of heat energy that penetrates into the wall and after time penetrates into the interior of the building is reduced. The wall, which is constantly heated by the sun, begins to behave like an accumulator: it collects and stores heat energy, which even in the evening, when it is already cool outside, continues to give off heat and warm up the interior. Reducing the penetration of heat energy into the interior translates into measurable savings in the electricity needed for the air conditioner to cool the room, both during the day and after dusk.

In addition, the coatings are characterized by good vapor permeability, which has a direct effect on drying the wall and increasing its thermal resistance. **KOFATERM OUTSIDE PAINT** reduces up to 40% of the energy demand not only in summer, but also protects the thermal insulation materials from degradation and dries the interior of the building, whose proper thermal resistance and efficiency give measurable savings also in winter. In addition, the coating largely eliminates micro-cracks on the surface of the wall, thermal bridges, and thus prevents condensation and prevents the formation of mold, algae and fungus.

The paints are easily applied in the same way as traditional emulsion paints, i.e. by brush, roller or spray. When creating coats of **KOFATERM PAINT**, the paint should be applied 2 to 3 times so that the final thickness of the coating is 0.4-0.5 mm. Maintaining such thickness is necessary to obtain maximum thermo-reflective properties and to maintain full performance. High adhesion provides very good bonding to all concrete, gypsum and wood surfaces.

Due to its properties, it can be used on the facades of residential buildings, blocks of flats, hospitals, hotels, offices, offices, production halls, on garages, animal husbandry, etc. **KOFATERM OUTSIDE PAINT** is a unique material that allows thermo-modernization of historic buildings under conservation protection. It is possible to color it, but inorganic pigments for emulsion paints should be used. It is resistant to UV radiation.

KOFATERM ROOF PAINT

KOFATERM ROOF PAINT is a thermo-reflective paint for use on roofs. The main task of this coating is to reflect more than 90% of the energy of electromagnetic waves coming from the sun and associated with the heating of the roof surface. Reduced in this way, the temperature of the roof surface is only a few degrees higher than the air temperature, resulting in a reduction in the amount of thermal energy that penetrates the envelope and after time penetrates into the building. There is also a reduction in the amount of thermal energy collected and stored in the partition (roof) during a sunny day, the excess of which continued to heat the interior, even in the evening when it is already cool outside. Reducing the penetration of thermal energy into the building translates into measurable savings in the electricity required to cool the rooms by the air conditioner, both during the day and after dusk. **KOFATERM ROOF PAINT** reduces energy demand by up to 40% not only in the summer, but also protects from degradation the thermal insulation materials inside the partition, whose proper thermal resistance and efficiency provide measurable savings also in winter.

In addition, the coating significantly eliminates micro-cracks on the roof surface, seals it, eliminates thermal bridges, and thus prevents condensation and prevents the formation of mold, algae and fungus.

The paints allow easy application, the same as traditional water-based dispersion (emulsion) paints, that is, by brush, roller or spray. When forming coats of **KOFATERM PAINT**, the paint should be applied 2 to 3 times so that the final film thickness is 0.4-0.5 mm. Maintaining such a thickness of the coating is necessary to obtain maximum thermoreflective properties and to maintain full performance. High adhesion provides very good bonding to all roof surfaces, including bituminous ones using **BITUM PRIMER** primer.

Due to its properties, it can be used on the roofs of residential buildings, blocks of flats, hospitals, hotels, agencies, offices, production halls, on garages, animal farms, etc. **KOFATERM ROOF PAINT** is a unique material that allows thermo-modernization of historic buildings under conservation protection. There is a possibility of coloring, but inorganic pigments for emulsion paints should be used. Resistant to UV radiation.

KOFATERM INSIDE MASS

KOFATERM INSIDE MASS is a thermo-reflective interior mass. Its main task is to reflect more than 90% of heat waves from the walls, improve the convection of air inside the room and favorably change the feeling of thermal comfort. The application of **KOFATERM INSIDE MASS** raises the temperature inside by about 5°C without the need to raise the temperature of the heat source (e.g., a radiator), and this in turn reduces the need for heating energy, which translates into savings of up to 40%.

In addition, the coating is characterized by high vapor permeability, which has a direct effect on drying the wall and increasing its thermal resistance. In addition, its thickness increases the thermal resistance of the partition and improves the acoustic insulation of the rooms. It is very flexible and eliminates stubborn micro-cracks on the wall surface and thermal bridges, and thus prevents condensation and prevents the formation of mold, algae and fungi.

The masses can be applied easily with a trowel for smoothing gypsum walls, with a roller for structural plaster and by spraying with structural plaster units. When creating **KOFATERM MASS** coatings, it is sufficient to apply them once, remembering that the final thickness of the coating should be 0.8-1.2 mm. The use of such thickness is necessary to obtain maximum thermoreflective, thermal insulation properties and maintain their full efficiency. High adhesion provides very good bonding to all concrete, gypsum and wood surfaces.

Due to its properties, it can be used in residential houses, blocks of flats, hospitals, hotels, offices, agencies, production halls, garages, food industry, animal husbandry, etc. **KOFATERM INSIDE MASS** is a unique material that allows for thermal modernization of historic buildings under conservation protection. It is possible to color it with pigments for emulsion paints. It is resistant to UV radiation.

KOFATERM OUTSIDE MASS

KOFATERM OUTSIDE MASS is a thermo-reflective mass for use on building facades. The main task of this coating is to reflect more than 90% of the energy of electromagnetic waves coming from the sun and causing heating of wall surfaces. The use of the mass lowers the temperature of the facade, which is only a few degrees higher than the temperature of the air, as a result of which the amount of thermal energy that penetrates into the wall and after time penetrates into the interior of the building is reduced. The wall, which is constantly heated by the sun, begins to behave like an accumulator: it collects and stores heat energy, which even in the evening, when it is already cool outside, continues to give off heat and warm up the interior. Reducing the penetration of heat energy into the interior translates into measurable savings in the electricity needed for the air conditioner to cool the room, both during the day and after dusk.

In addition, the coatings are characterized by high vapor permeability, which has a direct effect on drying the wall and raising its thermal resistance. In addition, its thickness increases the thermal resistance of the partition and improves the acoustic insulation of the room. It is highly flexible, seals and eliminates stubborn micro-cracks on the wall surface and thermal bridges, and thus prevents condensation and prevents the formation of mold, algae and fungus.

KOFATERM OUTSIDE MASS reduce up to 40% of energy demand not only in summer, but also protect thermal insulation materials from degradation and dry the interior of the partition, whose proper thermal resistance and efficiency give measurable savings also in winter.

The masses can be applied easily with a trowel for smoothing gypsum walls, with a roller for structural plaster and by spraying with structural plaster units. When creating **KOFATERM MASS** coatings, it is sufficient to apply them once, remembering that the final thickness of the coating should be 0.8-1.2 mm. The use of such thickness is necessary to obtain maximum thermoreflective, thermal insulation properties and maintain their full efficiency. High adhesion provides very good bonding to all concrete, gypsum and wood surfaces.

Due to its properties, it can be used on the facades of residential buildings, blocks of flats, hospitals, hotels, agencies, offices, production halls, on garages, animal husbandry, etc. **KOFATERM OUTSIDE MASS** is a unique material that allows for thermal modernization of historic buildings under conservation protection. It is possible to color it, but inorganic pigments for emulsion paints should be used. It is resistant to UV radiation.

KOFATERM ROOF MASS

KOFATERM ROOF MASS is a thermo-reflective mass for use on roofs. The main task of this coating is to reflect more than 90% of the energy of electromagnetic waves coming from the sun and associated with the heating of the roof surface. Reduced in this way, the temperature of the roof surface is only a few degrees higher than the air temperature, which reduces the amount of thermal energy that penetrates the partition and, after time, penetrates into the building. There is also a reduction in the amount of thermal energy collected and stored in the partition (roof) during a sunny day, the excess of which continued to heat the interior, even in the evening when it was already cool outside. Reducing the penetration of thermal energy into the building translates into measurable savings in the electricity needed to cool the rooms by the air conditioner, both during the day and after sunset.

In addition, its thickness increases the thermal resistance of the roof and improves sound insulation for rainfall noise. It is highly flexible and seals the existing roofing to form a membrane for water. It eliminates thermal bridges and thus prevents condensation and prevents the formation of mold, algae and fungus.

KOFATERM ROOF MASS reduces energy demand by up to 40% not only in the summer, but also protects from degradation thermal insulation materials, whose proper thermal resistance and efficiency give measurable savings also in winter.

The masses can be applied easily with a structural plaster roller and by spraying with structural plaster units. When creating **KOFATERM MASS** coatings, it is sufficient to apply them once, remembering that the final thickness of the coating should be 0.8-1.2 mm. The use of such thickness is necessary to obtain maximum thermoreflective, thermal insulation properties and maintain their full efficiency. High adhesion provides very good bonding to all roof surfaces, including bituminous ones using **BITUM PRIMER**.

Due to its properties, it can be used on the roofs of residential buildings, blocks of flats, hospitals, hotels, offices, agencies, production halls, on garages, animal farms, etc. **KOFATERM ROOF MASS** is a unique material that allows for thermal modernization of historic buildings under conservation protection. It is possible to color, but inorganic pigments for emulsion paints should be used. Resistant to UV radiation.

KOFATERM

MODERNITET-GRUPPEN

INFO@MODERNITET-GRUPPEN.DK

WWW.MODERNITET-GRUPPEN.DK

VEJLEVEJ 147,
8700 HORSENS

CVR 2134T5782482

Ready for innovation