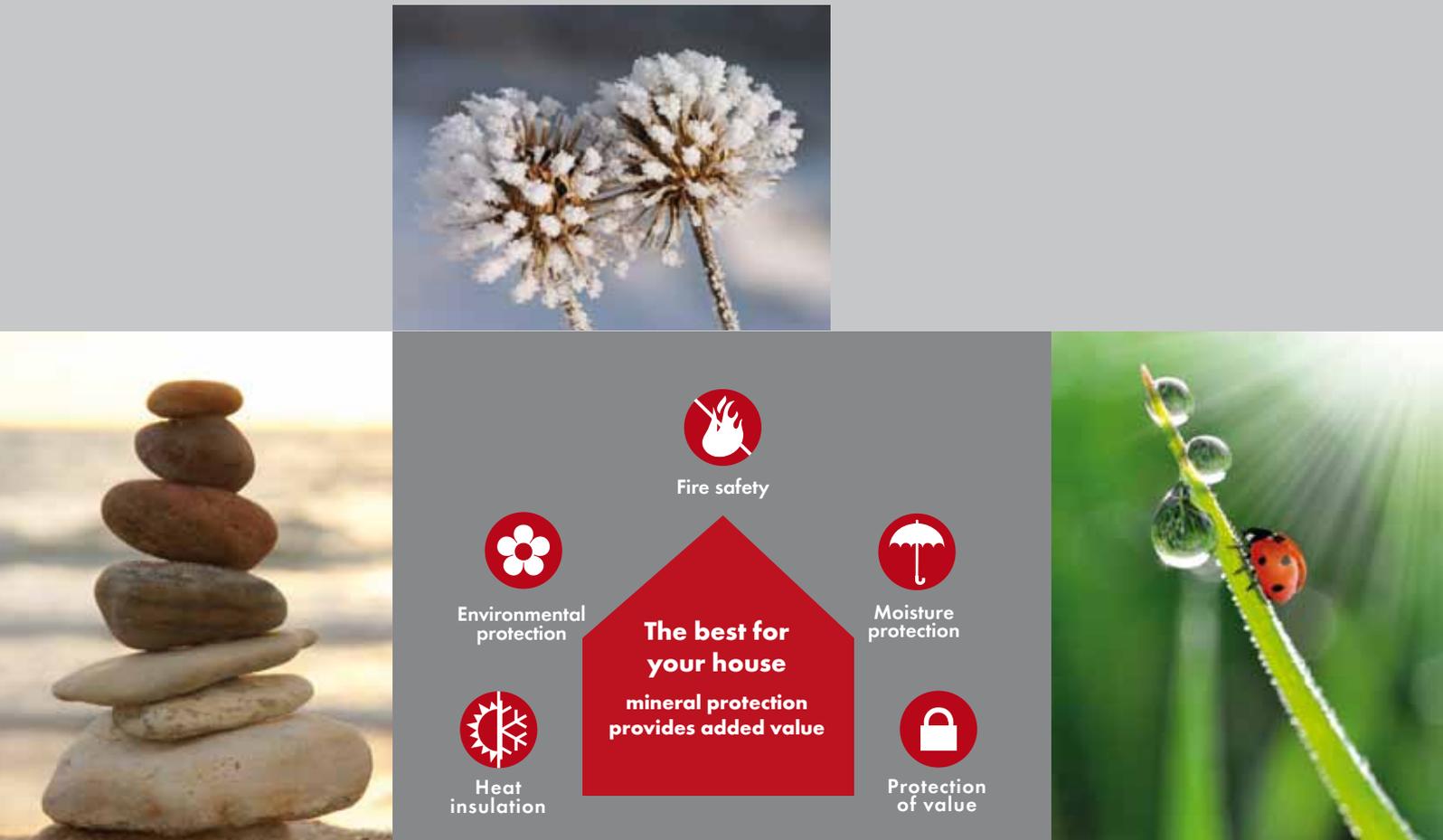


THE BEST FOR YOUR HOUSE

MINERAL PROTECTION PROVIDES ADDED VALUE!
KEIM EXTERNAL THERMAL INSULATION COMPOSITE
SYSTEMS

**Sustainable thermal insulation ...
protection for people and the environment**





Why thermal insulation is important

There is actually everything to be said for good thermal insulation. It makes sense in terms of your need for protection and comfort, reason, environmental awareness and your pocket.

On a global level, climate warming represents one of our biggest problems. It is caused by the emission of harmful substances, primarily carbon dioxide (CO₂), which occurs when fossil fuels such as crude oil and coal are burnt. Efforts worldwide to combat this need to focus on reducing CO₂ emissions.

In Germany, over 30% of end energy consumption is given over to the heating of internal spaces. Up to 60 % of this energy can be saved by insulating building façades, whether in new

constructions or as a modernisation measure in existing buildings.

The most sustainable and most financially worthwhile energy is the energy we don't even use in the first place. Professional thermal insulation makes an active contribution to protecting the environment, reduces heating costs and also increases living comfort and the value of your property.

KEIM mineral thermal insulation composite systems are financially worthwhile, environmentally responsible and socially compatible. They are among the best the market has to offer.



Five good reasons for choosing a KEIM Thermal Insulation Composite System:

1. Heat insulation
2. Environmental protection
3. Fire safety
4. Moisture proofing
5. Protection of value



1. Heat insulation

Optimum indoor temperature in both summer and winter

Indoor comfort calls for a pleasant and healthy indoor temperature. When the weather is cold, if exterior walls have no insulation, the temperature of the interior wall surfaces falls dramatically. This leads to unpleasant air circulation, which we experience as draughts, and also to cold interior walls that are susceptible to condensation and the formation of mould.

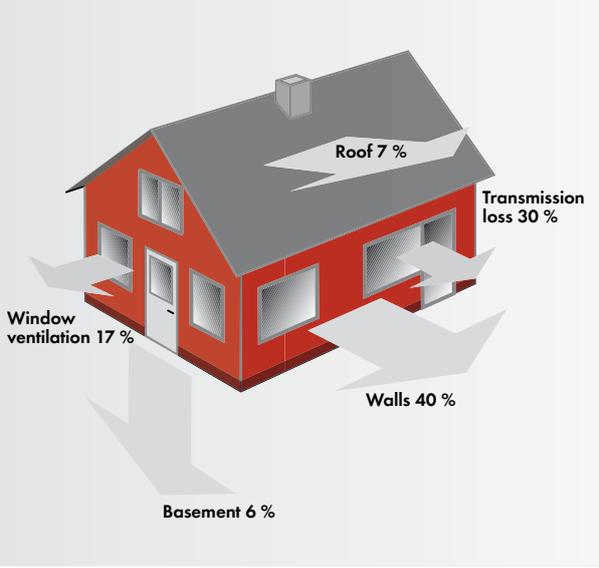
KEIM thermal insulation keeps the temperature of the interior wall surfaces at the same level as the room temperature. The result: Comfortable temperature and cosy heat with lower energy expenditure and therefore lower heating costs!

However, a building should not only be well insulated against the cold, but also against the heat in summer. Mineral insulating materials make it possible to achieve balanced and comfortable temperatures all year round.

Nice and warm in winter and pleasantly cool in summer. KEIM thermal insulation means a considerable gain in terms of quality of life within your own four walls at any time of the year.

Thermal insulation in brief

- Comfortable temperature
- Savings on heating costs
- Warm in winter
- Cool in summer



2. Environmental protection

ETICS reduce CO₂ emissions and save resources

Greenhouse effect as a result of CO₂ emissions, scarcity of resources, environmentally worthwhile action is essential and vital for our survival.

Protection of the environment must also play a crucial role in building and renovation work. Dealing responsibly with our energy resources begins inside our own four walls. Along with the saving of heat energy, the reduction of CO₂ emissions is a particular goal.

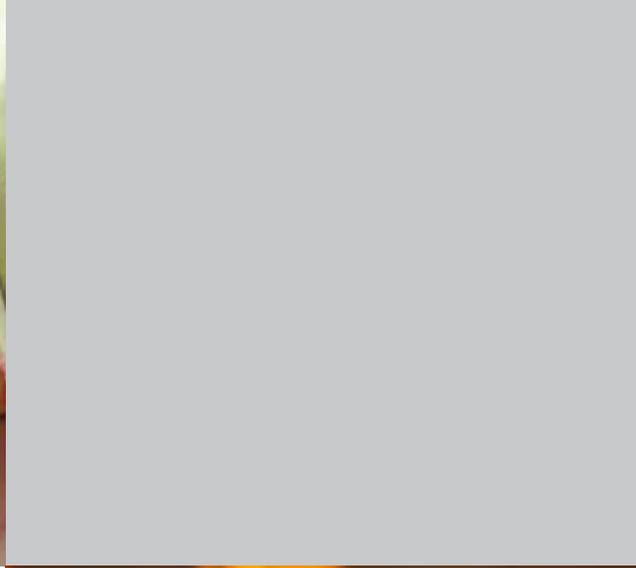
People who insulate their houses in the best possible way save precious energy on a daily basis, thus making a crucial contribution towards protecting both environment and climate.

A KEIM thermal insulation composite system optimises the respective thermal insulation method using environmentally efficient and particularly durable building materials. Sustainable building and renovation work also includes the life cycle of the building materials used, their manufacture, application, use and their removal and disposal respectively.

Protection of the environment in brief

- Climate protection
- Protection of resources
- No toxic substances
- Ecological

**KEIM ETICS –
Protection and safety all in one ...**



3. Fire safety

**Safety thanks to
incombustible
thermal
insulating
materials**

Where there's fire, there's smoke. Toxic gases containing dioxins are released, particularly in the case of house fires. In terms of the safety and protection of individuals, the first priority is to use non-combustible building materials wherever possible. This can prevent highly toxic emissions and the spread of fire.

KEIM mineral thermal insulation composite systems with their through and through non-combustible composition make an active contribution towards preventative fire safety in buildings. In the event of a fire, mineral insulating materials hamper the spread of flames thus helping residents to protect themselves against the impact of a fire, to keep escape routes free from obstruction and prevent the fire spreading to other buildings or parts of a building.

Optimum fire protection is included with KEIM thermal insulation composite systems. This means greater safety for people and buildings.



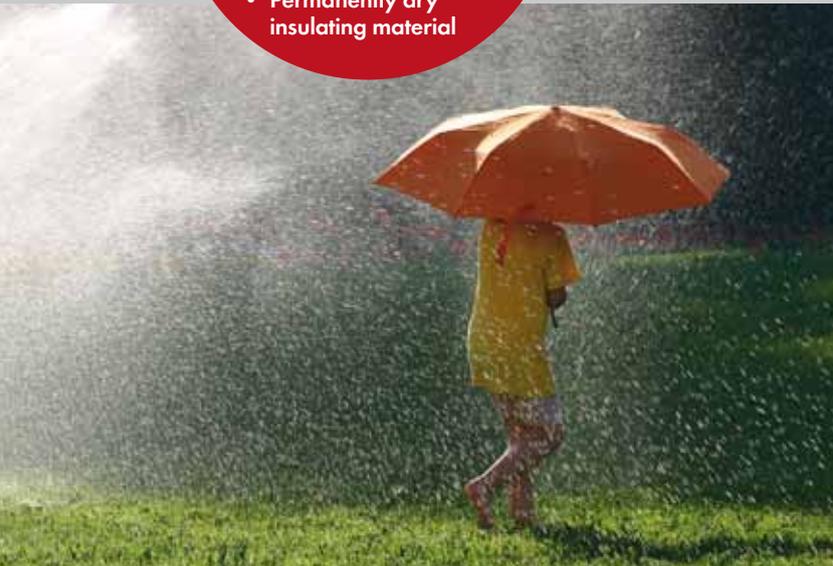
Fire safety in brief

- Non-combustible building materials
- No toxic fumes
- Safety for people and buildings



Moisture protection in brief

- No moisture damage to buildings
- Protection against mould/mildew
- Permanently dry insulating material



4. Moisture proofing

Moisture in the brickwork damages the fabric of a building. Moisture in insulating material destroys the insulation system. Permanent moisture from dew on the surface of building façades leads to the untimely growth of algae and fungus.

Protection of building fabric thanks to dry façades

A high quality mineral insulation system will protect your building against moisture both outside and in. Well and sensibly insulated walls prevent condensation on interior walls thus avoiding an infestation of mould or mildew. The excellent diffusion properties of mineral insulating materials and high-quality rendering and paint ensure that both the structure of the insulating layer and the supporting brickwork stay dry permanently.



5. Protection of value

ETICS means increasing value

Of course, every investment costs money at the outset, but this expense is paid off after a few years. In addition to saving energy, insulating building façades with KEIM also provides genuine protective functions for the building structure and opens up individual design options.

The high level of weather resistance and the low tendency to stain on the part of KEIM rendering and paint systems guarantee significantly lower maintenance costs and ensure that surfaces remain bright and retain their colour for generations.



Protection of value in brief

- Increase in value thanks to energy efficiency
- Protection of building fabric
- Durability

We insulate using materials that nature provides. Stone.



Stone and minerals have defied wind and weather for thousands of years. This is our prototype.

The best for your house: KEIM External Thermal Insulation Composite Systems



KEIM insulates better

Did you know that our houses have been insulated using thermal insulation systems for over 50 years?

Insulating building façades became essential a long time ago, because if it weren't for insulation, our houses would simply use too much heat energy. And as far as saving on heating costs is concerned, insulating building façades continues to be the most effective of all possible measures.

In the recent past, however, increasingly critical voices have spoken out and the constant tightening of statutory requirements has led to thicker and thicker "insulation packages".

So what is sensible? And what is the score with regard to efficiency, fire safety, algae and co.?

Many builders are uncertain. We will help you find a sustainable solution for your house using responsible systems and effective system parts. And in a virtually unlimited range of colours!

Discover the advantages and disadvantages of insulating materials, rendering and paint. Set your own individual priorities. What is really important to you? Consider at your leisure.

We recommend our mineral thermal insulation composite systems. For you, for your house and for your children.

Efficient insulation of course ...

KEIM AquaROYAL-System-MW The best for your house



- Mineral wool as insulating material
- Mineral mortar, rendering and paint
- Greater thermal insulation
- No toxic biocides
- Innovative - hydroactive
- Incombustible
- Stable due to thick layers
- Particularly durable
- No colour fading



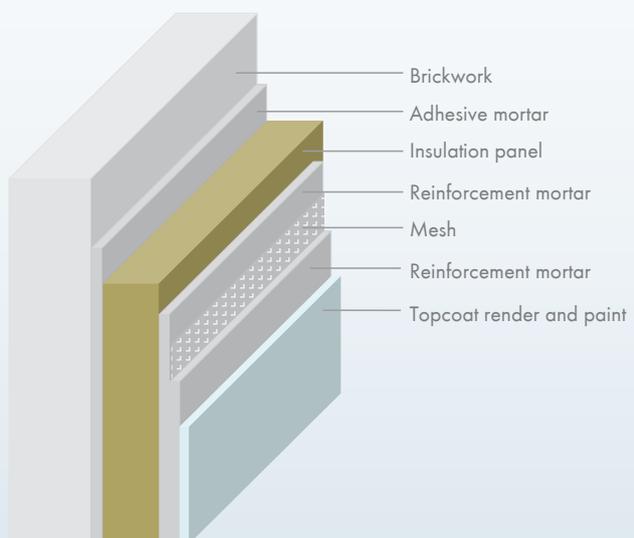
AquaROYAL: Efficiency and responsibility

Thermally insulated facades are increasingly affected by algae and fungus infestations because they are colder on the surface and therefore superficially damp for a long time (autumn/winter/spring). For this reason, most rendering and paints have been replaced to date with insulation containing toxic biocides. We are convinced, however, that this is not the right way as biocides are water-soluble. They are washed away by the rain, thus polluting the environment and currently only have a limited effect in terms of time. They do not by any means function as "cure-alls" against algae and fungus.

We take a different approach. We prevent surface water through active moisture management in the layer structure (hydroactivity).

Specifically, prevention rather than cure, the prevention of moisture rather than the use of toxic substances.

The AquaROYAL-MW system consists entirely of non-combustible building materials, has excellent insulating values and dispenses with biocides.



Ecological insulation of course ...

KEIM **X**Por-System The best for your house



- "Aerated concrete" as insulating material
- Solid mineral through and through
- Fully recyclable
- Incombustible
- Recommended as safe for the environment
- Particularly durable
- No colour fading

XPor: Ecology and safety

The centrepiece of the XPor thermal insulation composite system is the mineral insulation panel: a robust insulating material with unrivalled ecological properties. The insulation panel is a purely mineral product made of sand, lime and cement: "The material from which the insulation comes" is manufactured in manner that saves on resources and energy. It is moisture permeable, non-combustible and fully recyclable - an ecological alternative!

The mineral insulation panel carries the designation of "sustainable building product" and is guaranteed to be environmentally compatible and safe. There are also no problems in terms of its disposal on removal since the insulation panel can be disposed of along with the supporting building material. Naturally, all the other system components right down to the paint are mineral through and through, highly durable and colourfast.



Optimal insulation of course ...

KEIM AquaROYAL-XPor-System The best for your house



- Aerated concrete as insulation material
- Through and through solid mineral
- Woodpecker-safe
- Incombustible
- No toxic biocides
- Unequaled long-lasting
- Sustainable
- Recyclable
- High heat-retaining capacity
- No colour fading

AquaROYAL Saving is not enough anymore.
+ XPor: Knowledge and experience prevail more
Essence and more so that the ecological load of
of the best a common ETICS is not compensated by the nominal advantage of saved heating costs. Who still wants washed out biocides in their garden, an unsolved later disposal, damages caused by woodpeckers, fast-fading colours, a poor appearance and petroleum products around the own four walls? KEIM AquaROYAL-XPor promotes consequently the holistic needs of modern living:

- A certified, environmentally sound insulation panel consisting of sand, lime and cement with best ecological features and good insulation values gives you the right feeling of having made an up-to-date and future-oriented decision.
- An overall system with high heat retention capacity which obviously

lowers the negative effects like they are known from extreme differences in temperature in common wall structures.

- A solid, mineral and valuable system with excellent sound protection properties that protects against pecking by birds.
- A render system which acts more sustainable and above all more efficient in the long term against algae and fungi growth than any other known alternative – and this solely via principles of structural physics.
- A coating that will show even years later the same colour shade you chose.
- A render surface that is so easy to refinish, if necessary, like hardly any other.

When people are building they normally think also about their children's future. KEIM AquaROYAL-XPor is made for the future of our children!

Individual design of course ...

KEIM's mineral paints The best for your house



**Strong colours
and unequalled
long-lasting**

How long did it take you to finally decide on the new colour shade for your facade?

Windows, roof tiles, landscape - why shouldn't everything go together? Don't you wish that everything should stay exactly this way for as long as possible?

There are facades that were coated with KEIM mineral paints well over a hundred years ago and still stand today in their original coatings shaping the historic appearance of their city.

By using purely natural pigments and the unique adhesion principle of mineral silicification every coating with KEIM's mineral paints is highly durable and definitely longer lasting than any other coating with common organic paints, because those only adhere to the substrate by forming a superficial film.

**Trust the unequalled
longevity and colour
stability of our
KEIM's mineral paints.**

To make your facade look good for years the way you conceived it - is maybe the best you can do for your house.

Good insulation of an outer wall can also be installed inside ...



Five good reasons for choosing a KEIM Interior Thermal Insulation System:

1. Richly ornamented facades
2. Sophisticated facade details
3. Private ownership in a multi-party building
4. Temporary use
5. Keeping the limits of existing development

Efficient alternative to external thermal insulation

Your house is the most beautiful in the street?

Any insulation installed to the outside would be an insult for architecture and destroy the look of the building forever? But inside it is uncomfortable and cold? The cold from outside crawls far into the room and is more than unpleasant on cold winter days? All furniture stands far enough away from the wall so that no mould can occur?

Unfortunately it is like that! The most artful facades have the worst thermal insulation, however, mostly very spacious interior rooms. Ten centimetres less for a comfortable home! This would be the only compromise when choosing our KEIM iPor interior insulation system. Convince yourself, there are good reasons for an interior thermal insulation!

Healthy insulation of course ...

KEIM iPor-System The best for your house



- Aerated concrete as insulation material
- Through and through solid mineral
- Recommended in terms of structural biology
- Healthy
- Sustainable
- Comfortable
- Heat-retaining
- Regulates the room air moisture
- Simple and beautiful

Feel-good ambience

Comfortable feeling starts with a pleasant indoor climate and the knowledge of having made the proper decision for a healthy living in the sense of building biology and in favour of high life quality, sustainability and value stability. KEIM iPor-System - through and through mineral - guarantees optimal functionality and performance, occupies a leading position among mineral insulation materials and convinces by a coherent and efficient interplay of the system components. It is absolutely free from materials harmful to health or substances which are sensed as unpleasant. The iPor structure insulates and also retains the heat which is then given back into the room. KEIM iPor improves the water vapour sorption of the outer wall and thus very much the indoor climatic conditions of the building. It provides a relatively constant, pleasant room air moisture all year round.

KEIM iPor is a breathable system and absolutely uncritical regarding subsequently mounted penetrations, even from the structural point of view. Practically any further room design and decoration is possible without restrictions.

KEIM iPor is absolutely predestined for a subsequent design with mineral paints thanks to its mineral nature. Use KEIM finishing renders, KEIM texture coatings or mineral paints from our large collection and there won't be any limit to your creativity! You will be thrilled by the velvety, matt, natural appearance of KEIM mineral paint systems.



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