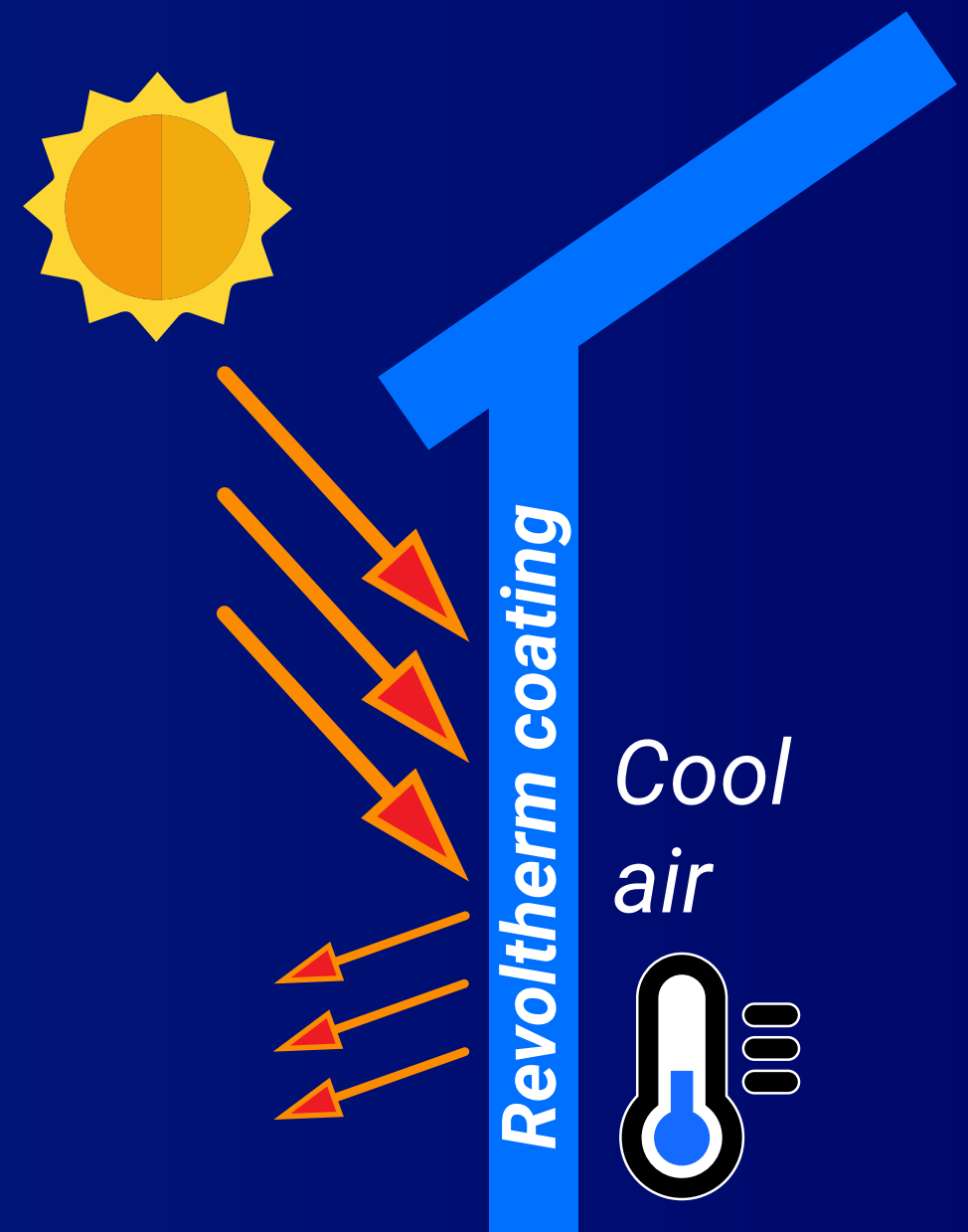


Revoltherm is a thermal protection and insulation coating. It can be used both indoors and outdoors, on surfaces with different textures and adheres very well to metal, wood and plastic surfaces. The material is sufficiently flexible, resists small expansion movements and is durable, not shrinking or losing quality over the years.

Thanks to ceramic beads and nano technology, our material reflects 84,7% of thermal radiation from a thickness of 0.8 mm and has an extremely low thermal conductivity of 0.008W/mK, which makes it an excellent thermal insulator.

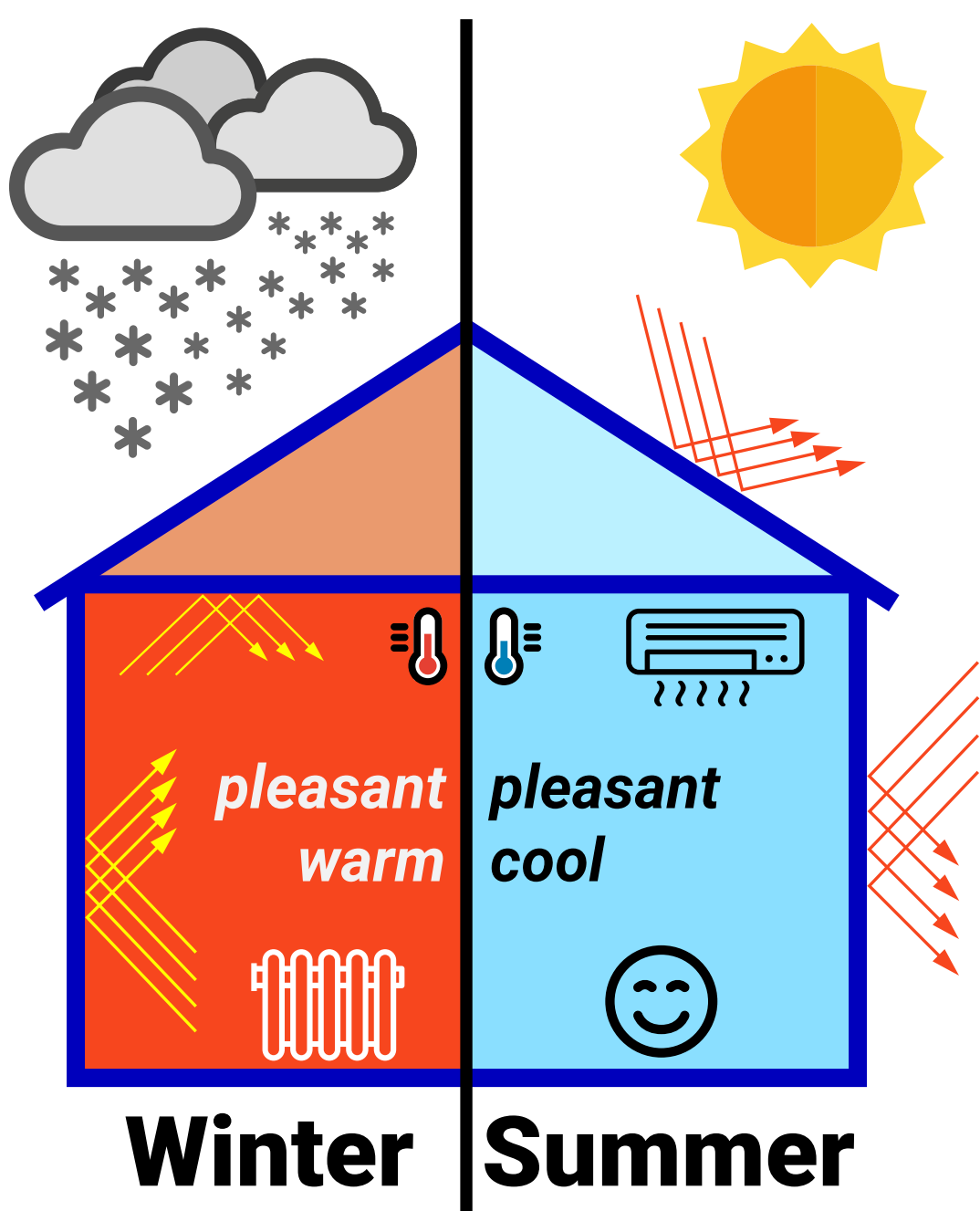
Its insulating and heat-reflecting properties keep interiors from heating up in the summer heat. The vacuum created in the material protects metal from corrosion, it is weather-resistant and antistatic, and does not collect dust. Our product has EuroClass A2 fire classification and is completely non-combustible.

Its application to the surface is possible in temperatures ranging from +5°C to +150°C, which in many cases allows insulation work to be carried out without interrupting the technological process, for example when insulating high temperature pipelines. The material works effectively at temperatures between -40°C and +600°C.



### What solution does Revoltherm offer?

- It drastically reduces the energy consumption of cooling/heating units by reflecting heat from outside in summer and preventing heat escaping when used indoors in winter.



- It resists and prevents mould growth, forming a resistant surface for mould and bacteria.
- It is very suitable for the thermal insulation of listed buildings, as it can be easily applied as a thin layer on the facade.
- Unlike traditional insulation systems, there is no unnecessary weight on the supporting structure and it does not take up significant space, making it suitable for both outdoor and indoor use.
- It prevents precipitation, condensation, rusting, and is ideal for industrial and production units where boiling, precipitation, and condensation of metal tanks and piping are a problem.
- Its ease of application and excellent adhesion make it suitable for metal, wood and plastic surfaces. It can easily be used on halls, metal roofs, flat roofs, pipework, containers, van cargo spaces, pretty much any surface where heat reflection and insulation are required and where an effective result is desired.

### Properties

- Water-based
- Colour: white, can be coloured
- Thermal conductivity:  $\lambda = 0,008\text{W/mK}$
- 84,7% solar reflectance
- Ultra thin, 0,8mm thickness
- Density when wet: 516 ( $\pm 10\%$ ) kg/m<sup>3</sup>
- Vapour barrier and breathable
- Adhesive strength: min. 1,0 N/mm<sup>2</sup>
- Drying time: 48 hours
- Works effectively between -40°C and +600°C
- Use above +5°C
- Application: airless
- EuroClass A2 fire classification
- 12% elongation and it will hold through small cracks



**STOP THE HEAT  
AND SAVE  
ENERGY!**

## **The environmental benefits of Revoltherm**

Revoltherm is an environmentally friendly, thermal protective and insulating coating. It provides both heat and fire protection after simple application, making it suitable for a wider market. From an environmental point of view, Revoltherm reduces energy consumption, thus also reducing pollution from energy consumption.

*Perfect for:*

- Houses, apartment buildings
- Listed buildings
- Airports, hangars
- Agricultural buildings
- Livestock buildings
- Showrooms, salons
- Public institutions
- Logistics/distribution centres
- Warehouses
- Hospitals
- Pipelines
- Air ducts
- Storage tanks
- Military facilities
- Offices
- Transport, storage containers
- Shopping centres
- Passenger aircraft
- Vans
- Manufacturing plants
- Wineries
- Garden centres
- Stadiums
- Malls

## **Nanotechnology thermal insulation**

In terms of the potential applications of nanotechnology in the construction industry, thermal insulation is perhaps the area where the difference between the properties and behaviour of normal-sized and nanostructured materials is most noticeable.

The ultra-thin ceramic thermal insulator contains microscopic, hollow, vacuum-formed ceramic spheres inside. These hollow spheres are produced from high temperature ceramic melts and, after cooling, a relative vacuum is created inside them. In these microscale vacuum spaces, the laws of heat propagation and conduction no longer apply in the usual way.

Its composition makes our insulation tough but flexible. There is no chance that damage or accidental impact will damage our insulation to such an extent that it will lead to a deterioration in quality.

The spheres are dispersed in a liquid mixture of synthetic rubber, acrylic polymers and inorganic pigments. The insulating material is in liquid form and can therefore be easily applied to hard-to-reach areas using an airless, so that after several layers have solidified, thanks to nanotechnology, an ultra-thin insulation is obtained.

## **The next generation of thermal insulation**

*The thermal insulation technologies and materials used in the construction industry exploit the thermal insulating properties of air and have now reached their limits. These traditional thermal insulation materials, such as expanded polystyrene, nickel and rock wool sheets, will make it difficult to meet the EU's energy saving targets in the future.*

*This could be helped by nanotechnology-based materials that provide much more effective thermal insulation.*

**Revoltherm is a great pioneer of this technology.**

