ClimateCoating®

Reflective Membrane Technology

ThermoVital

Innovative long-term protection against mold for a healthy indoor climate and sustainable living quality

GREENGUARD GOLD

GERMAN INNOVATION AWARD '18 WINNER

ENERGY EFFICIENCY AWARD 2018

Łukasiewicz IMPiB

Reflective Membrane Technology

ThermoVital:
No chance for mould!

Mould in the home can be harmful to health. Mould on walls in food-related businesses is a critical hygiene issue and can have serious consequences. Once mould appears, it must be removed, and its return must be prevented. No chance for mould where it doesn't belong!

A solution to prevent mold growth is the wall paint *ThermoVital*. The physically effective long-term protection ensures indoor hygiene and a healthy living environment, without using fungicides. Whether for private rooms with increased humidity, such as bathrooms, kitchens, or basements, or commercial spaces with higher hygiene requirements, such as bakeries, commercial kitchens, or wellness facilities, *ThermoVital* provides preventive protection. This specialized paint regulates indoor humidity and the negative effects of thermal bridges, thereby offering long-term protection against mold formation on walls and ceilings.

ThermoVital is the innovative protection against mould with a long-lasting physical effect – completely fungicide-free. For good indoor hygiene and healthy living and working.

Provides proactive protection against recurring mould growth. Reduces the negative effects of thermal bridges by evenly distributing wall temperatures.

1,2,3… mould-free – the systematic mould removal

Mould stains on the walls not only look unsightly, they are above all a health hazard. Even small amounts of mould spores can trigger allergic reactions, larger amounts can damage the organism. Moulds need nutrients and moisture to grow. Since nutrients are present in buildings in a more or less readily available form, moisture is of crucial importance. The temperature and the pH-value play rather a subordinate role, since moulds can grow in a wide temperature and pH-range. If black mildew stains or white mould fluff are already visible, action must be taken.

This is how it's done:

1. **Treat visible mould growth with Sanosil S010.** Contact time 25 to 30 minutes. (Wear a breathing mask!)
2. **If necessary: Treat the room air and secondary contamination with Sanosil S003.** Furniture or production equipment remain in the room so that spores adhering to them are deactivated. Allow to act for approximately 120 minutes. Depending on the level of contamination, mould-affected areas may need to be retreated with Sanosil S010 after removing wall coverings. (Wear protective suit and mask!)
3. **Afterwards, apply the *ThermoVital* interior coating** – for long-term protection against recurring mould. **Tip:** If you want to prevent this, you can coat rooms with increased moisture levels with *ThermoVital* straight away. The colour design is versatile, as the dispersion can be tinted.

Step 1

Sanosil S010 mould control agent (surface treatment)

Step 2

Sanosil S003 surface and aerosol disinfection (room fogging)

Step 3

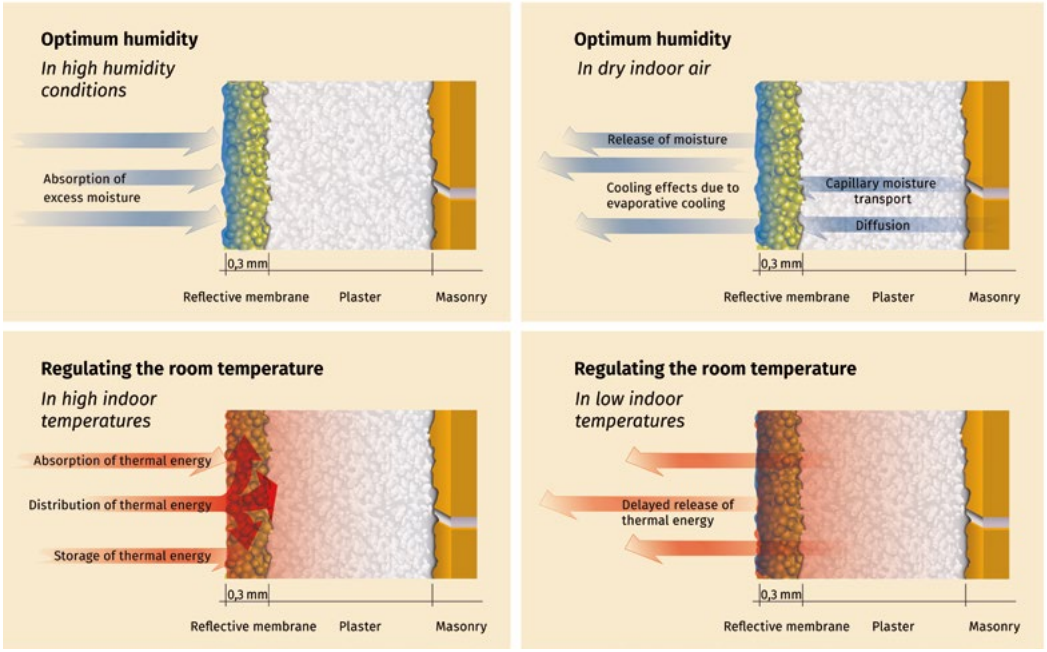
Fungicide-free
Tintable in many colours

ThermoVital – two coats applied by roller, brush, or spray (airless)

Reflective Membrane Technology

The secret lies in specially developed glass-ceramic hollow microspheres that enclose a vacuum. When these glass-ceramic microspheres are combined with an extremely adhesive, specially developed dispersion and activators, the result is a coating that forms a reflective membrane after application. The effect of the reflective membrane technology becomes clear when considering the building physics processes of reflection, directed evaporation, antistatic properties, and material durability together. These outstanding properties are incorporated in the *ThermoVital* interior wall coating and other products under the *ClimateCoating*® brand.

The surface-active wall paint *ThermoVital* contains tiny glass-ceramic hollow spheres. After application, the coating acts like a membrane, supporting moisture and heat transport through purely physical processes – via capillary action and thermal energy storage capacity in interaction with the humidity and room temperature.



The physical principle for regulating indoor humidity and temperature for interior wall coatings

Environmental benefits: *ClimateCoating*® products are water-based and solvent-free. They carry the "Greenguard Gold" Certification. The technology, products, and their application have received multiple international awards, including the German Innovation Award. The jury's statement reads:

> *With the ClimateCoating® product line, it becomes clear that heating and cooling energy can be saved with a thermo-ceramic coating in a simple, economically compatible and resource-friendly way. Without environmentally polluting biocides, ClimateCoating® ensures reduced algae formation on the façade and prevents mould formation in the interior area. In the long term, material-energy and worker resources are saved, expensive building materials are protected sustainably, values for future generations are preserved and the environment is spared.*

GERMAN INNOVATION AWARD '18 WINNER

ThermoVital is used wherever hygiene is particularly important: in kitchens and washrooms of schools, daycare centres, hospitals, and nursing homes, as well as in wellness areas. Or in rooms for food production and storage. Everywhere there are increased hygiene requirements or higher moisture exposure.

Areas of application, properties and processing

LONG-TERM PROTECTION

- against mould growth in interior spaces
- against damp corners

The unique dispersion physically promotes the drying of walls to construction-equilibrium moisture and regulates indoor humidity.

It addition:

- reduces the negative effects of thermal bridges
- can be used proactively to prevent mould formation

COMFORTABLE LIVING

- influence on indoor humidity toward the optimum of approx. 55%
- improvement of indoor hygiene
- enhancement of the indoor climate
- increase in living comfort

ENVIRONMENTALLY FRIENDLY

- water-based
- very low in VOCs
- fungicide-free
- aromatic-free
- free of organic solvents
- mild odour and safe for health

DECORATIVE

- for interior use
- matte finish
- excellent coverage
- over 100,000 colour shades available
- very high colour stability

CONTAINER SIZES AND APPLICATION

- ready-to-use dispersion
- 5.0 / 12.5 / 19.0 litres in oval or round containers
- consumption (depending on substrate) approx. 330ml/m² for two coats
- simple application by brush, roller or spraying (airless)
- cleaning of used tools with water (disposal in case of mould contamination)

ThermoVital – Innovative protection against mould. We are happy to answer your questions about the product and application.

www.climatecoating.com/en/product/thermovital

The mould problem

Mould fungi are welcome on your favourite cheese or as sources of antibiotics. In bathrooms, kitchens, or cellars, however, they are extremely unwelcome. Not only because they are unpleasant, but also because airborne spores can trigger allergic and irritating reactions when inhaled – affecting both people and pets.

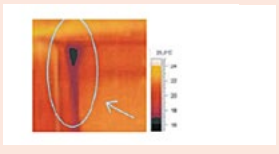
Most people only address this issue once mould is visible or detectable by smell. Rarely do they consider beforehand whether the conditions in rooms or on building materials are favourable for mould growth. The main cause is excessive moisture in the materials and air, combined with nutrient availability in the substrate and relatively constant temperatures. Prolonged indoor humidity above 70% occurs because warm air holds significantly more moisture than cold air, which then condenses in cool corners, on cold walls, or on objects. Without proper drying and adequate ventilation, this moisture persists, creating an ideal environment for mould spores: behind bedroom wardrobes, in kitchen corners, on basement ceilings, or under bathroom windows. Whether scattered black mould spots or concentrated white mould fuzz, action must now be taken to remove the mould and prevent its return. The methods and products used should be safe for humans while providing high effectiveness and long-term protection.

The market offers countless products and solutions, many based on aggressive chemicals such as chlorine solutions, high-concentration alcohols, or heavy metals. However, mould prevention can also be achieved through physical means, as *ThermoVital* demonstrates.

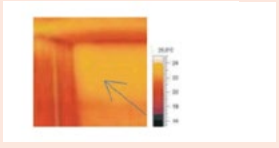
ThermoVital

The effects on thermal bridges

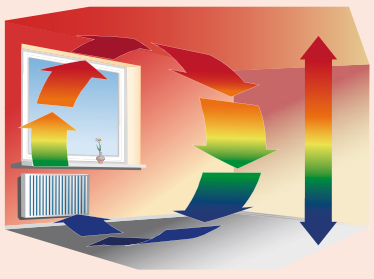
Thermal bridge untreated. Room heat is lost, resulting in higher heating costs.



Thermal bridge painted with *ThermoVital*. Image taken five months after treatment. The heat loss has been stopped.



The heat distribution effect



Without *ThermoVital* coating:
High temperature difference between top and bottom.

With *ThermoVital* coating:
Better heat distribution between top and bottom.
Greater comfort (no cold feet) and savings on heating costs.

Tips for healthy living

The most common causes of mould growth include:

- cracks in the façade or damaged roofs
- lack of protection from rain
- thermal bridges
- rising damp in masonry
- insufficient drying after construction work
- insufficient air circulation caused by tightly closed windows and doors
- improper heating and ventilation

Each cubic meter of indoor air contains mould spores*. These spores usually settle in damp environments.

Mould problems occur especially in winter, when exterior walls cool down so much that indoor humidity condenses on plaster and wallpaper. In technical terms, this happens when the dew point temperature is reached or fallen below. Older, dirty surfaces promote initial mould colonization. Particularly vulnerable are chalky paints and highly moisture-absorbent textured plasters.

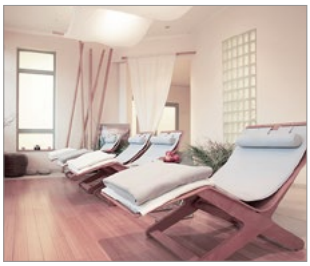
With just a few rules, it is possible to keep walls and corners mould-free, provided that there are no major problems such as unhindered ingress of moisture due to a leaking roof, a defective façade, or other construction issues.

- ➡ Place furniture at a distance from the walls. The air must be able to circulate between the wall and the furniture.
- ➡ Avoid thick, floor-to-ceiling curtains.
- ➡ Avoid using humidifiers.
- ➡ Ventilate all rooms several times a day with fully opened windows. Avoid permanent ventilation with tilted windows, as wall surfaces around the window cool down and moisture can condense more quickly.
- ➡ Ventilate the bedroom thoroughly after getting up.
- ➡ Do not let bedrooms and rarely used rooms cool down completely during cold seasons.
- ➡ After bathing or showering, ventilate thoroughly. In windowless rooms, ensure that the ventilation system functions properly. Clean built-in filters every 2 – 3 months and replace them annually.
- ➡ Empty and clean trash bins regularly.

* The exact number of mould spores in the air can only be determined through sampling and laboratory analysis, which is often carried out by indoor air quality professionals to assess mould levels. If you are concerned about mould spores in the air, you should consult a specialist.

Public and commercial areas of application

Indoor swimming pool,
hotel, sanitary facilities



Laundry, sauna,
wellness area

Food warehouse, brewery,
agricultural area

Production facility,
laboratory, medical area

Are you looking for a paintable solution for interiors and for mould prevention or treatment?
Then get in touch with us. We will be happy to share our worldwide practical experience with you.

info@sicc.de

Your authorized dealer:

ClimateCoating® – Intelligent coatings with added value.
For buildings, interiors and industrial applications.
Environmentally friendly. Powerful. Effective.

Made in Germany. Made for you.

SICC Coatings GmbH from Berlin is the leading specialist supplier of climate-active coatings with the longest experience in all climate zones and application areas. The functional coatings are based on the reflective membrane technology. For the energy-saving effect of the technology, SICC Coatings was awarded the "German Innovation Award" in 2018 as well as with the "Energy Efficiency Award" in Singapore, among others. SICC Coatings is certified in quality and environmental management according to DIN EN ISO 9001:2015 and 14001:2015.

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