

LIGHT WORKS

HT coating



LIGHT
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DEUTSCHE
STEINZEUG  **AGROB BUCHTAL**

Jasba 



Healthy living – more important than ever!

We spend 90% of our life indoors (source: Sentinel Haus Institut 2014) which is why it is so important to be able to rely on a healthy living environment.

We are all required to handle our natural resources more sustainably now and in the future. Which is why when we build new buildings or renovate older ones, our focus is usually on effective exterior insulation which saves energy. Insulated façades and perfectly sealing windows and doors – featuring triple glazing – are now a reality.

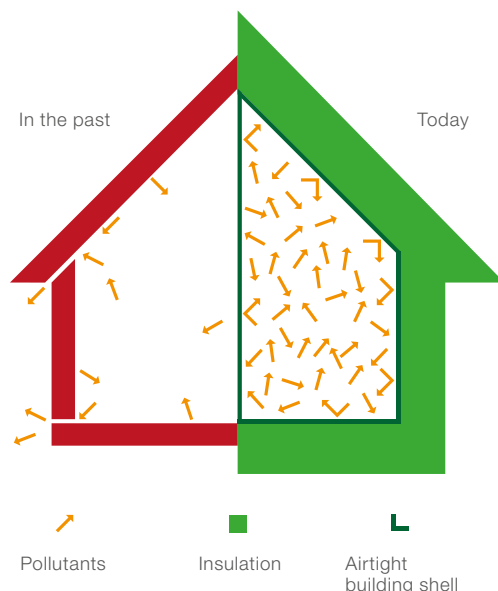
But increasingly dense building shells also ensure that odours and pollutants are no longer able to simply dissipate outwards. They collate in the rooms in which we live. And often they have a negative impact on indoor air.

HT ceramic tiles – the solution for healthy living environments

Careful selection of materials used in indoor areas is therefore of increasing importance. HT-coated tiles (Hydrophilic Tiles) can make a significant contribution towards healthy living environments as they help to

- **impede the growth of mould, bacteria and other microorganisms,**
- **further facilitate cleaning of surfaces,**
- **break down pollutants in the air and odours in indoor areas.**

And all of this simply through the effects of light!



Kitchen, Series: Jasba-TRACES



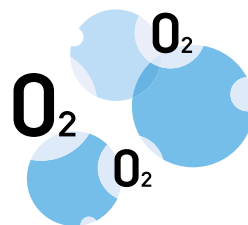
Series: Jasba-NATURAL GLAMOUR



This impressive effect is documented in a film.
Simply follow the QR code.
www.clean-air-ceramics.com/antibac



HT – **effective** against mould and bacteria.



Ceramic tiles are already recommended even without this special treatment – after all, their smooth surface structure prevents permanent infiltration by house dust mites, for example, which can trigger allergic reactions among people. According to tests by independent institutes, bacteria and mould are destroyed and new growth effectively impeded simply through contact with the HT ceramic surface.

Active against microorganisms

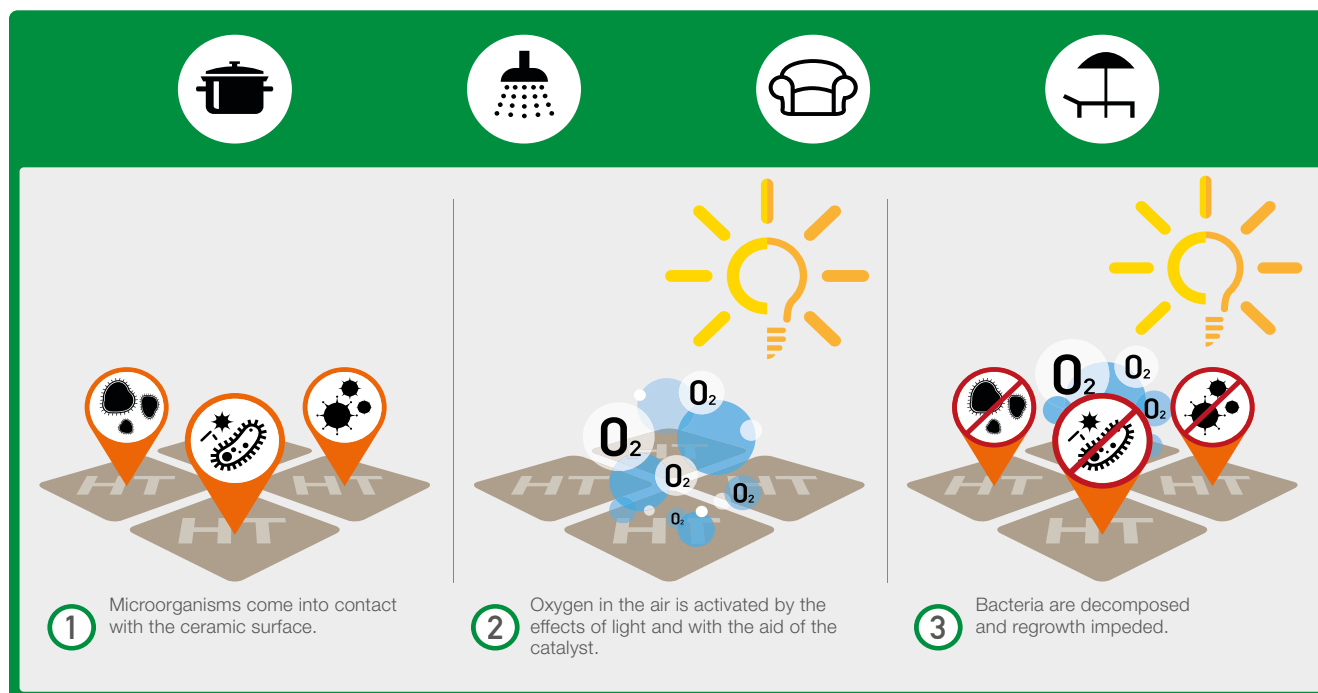
The activated oxygen breaks down microorganisms such as bacteria and germs which can cause illness. At the same time, new growth is effectively impeded, whereby HT is entirely non-toxic and free of irritants. This innovative technology therefore sets entirely new standards wherever cleanliness and hygiene are paramount inside houses and apartments.

Always effective

Thanks to innovative HT technology, all of this works entirely without additional chemicals or any health risks for people. And even more importantly: not just for a certain period of time but permanently. After all, the natural catalyst is burned permanently into the tile glaze. Accordingly, the antibacterial effect never evaporates but is rather retained over the entire service life of the ceramic. Hygienic cleanliness in all areas of application: HT-coated ceramic tiles make a valuable contribution towards naturally hygienic living areas. Microorganisms such as mould, bacteria and fungi in indoor areas and algae and moss in outdoor areas, e.g. patio tiles, are broken down and regrowth impeded.

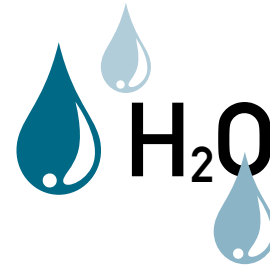
99% fewer bacteria

On contact with the HT ceramic surface, up to 99% of bacteria are destroyed (under test conditions by Dr. Ralph Derra, ISEGA Forschungs- und Untersuchungs-Gesellschaft mbH, Aschaffenburg).



Renowned test institutes confirm these effects.
See page 11.

HT – extremely **easy to clean.** Water on board.



HT-coated tiles are particularly easy to clean as their surfaces are especially hydrophilic (literally: water-receptive). As a result, water does not form droplets or balls which ineffectively pearl off or dry leaving unattractive marks but rather a wafer-thin film is formed.

Active against dirt

This water film ensures that even the tiniest particles of dirt and stubborn residue such as grease which is difficult to remove under normal conditions are thoroughly infiltrated, detaching them from the surface and enabling them to be simply wiped off. The result is a perfectly clean surface at all times.

Dual competence

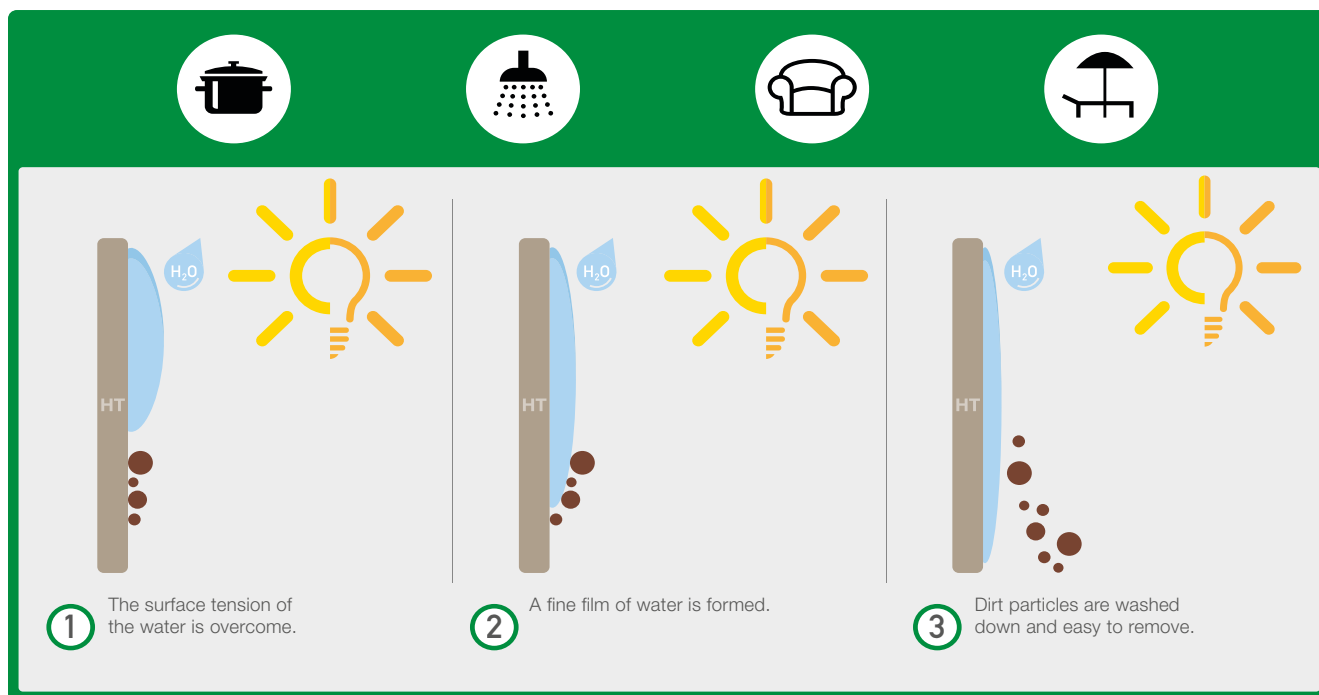
The revolutionary HT coating not only saves a great deal of time when cleaning floors and walls but also drastically reduces the volume of chemical cleaning agents required – representing a bonus for man and the environment. HT-coated tiles therefore make another extremely effective contribution towards sustainable living!

50% more economical

HT-coated ceramic tiles cut consumption of cleaning agents by half and save time during housework!

Series: Twin, AGROB BUCHTAL





➔ Renowned test institutes confirm these effects.
See page 11.



Just how this works is presented in this film.
Simply follow the QR code.
www.clean-air-ceramics.com/clean





HT – healthy feel-good environment. Healthier living.

Unpleasant odours or even harmful substances such as formaldehyde in homes? Emissions from building materials can be the source of unhealthy indoor air. Paint, sealing materials and furniture as well as ovens and gas stoves emit pollutants such as formaldehyde or nitric oxides. HT is an appropriate tool to combat this. After all, the activated oxygen arising from the photocatalytic process on the surface of the HT-coated tiles also decomposes these volatile components in room air. The result: clean air! This is not only pleasant in the bathroom and kitchen but also ensures a healthy environment throughout the entire house.

indoor air and a permanently pleasant and fresh living environment. At home – yet always enjoying fresh air.

The air is clear

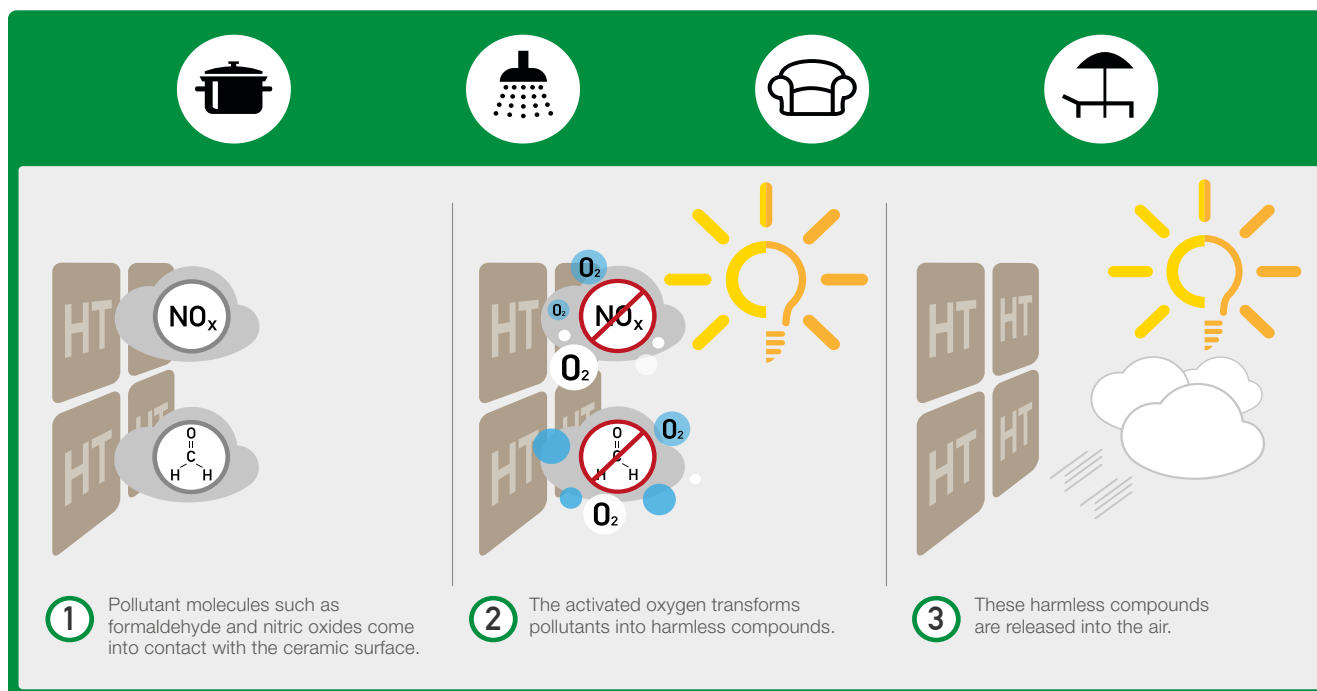
Even uncoated tiles are distinguished as particularly pleasant floor and wall coverings as their mineral nature means that they dissipate practically no emissions into their surroundings. But here too, HT demonstrates what else is possible! As HT-coated tiles break down odours and even clean the surrounding indoor air of pollutants such as nitric oxides or formaldehyde right through to tobacco smoke.

Active air cleaning

The photocatalytic process acts like an air freshener here: when pollutant molecules come into contact with the tile surface, titanium dioxide as a light-activated catalyst immediately transforms them into mineral salts which are entirely harmless and which are then simply washed away the next time the tiles are cleaned. The result is significantly improved



Just how HT-coated tiles ensure healthy air is shown in a film. Simply follow the QR code. www.clean-air-ceramics.com/air

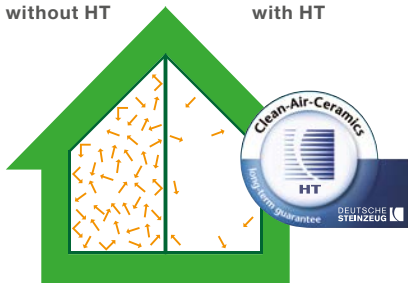


➡ Renowned test institutes confirm these effects. See page 11.



without HT

with HT



Peter Bachmann, Director of the Sentinel Haus Institut für wohngesundes Bauen and an acknowledged expert in indoor hygiene, recommends HT ceramics as an innovative solution within the context of sustainable building.

sentinel  institut

HT ceramic – no perceivable changes. **But still special.**

Product guarantee by Deutsche Steinzeug

During the production process, the HT coating is bonded permanently at a high temperature with the tile surface – making it practically indestructible. This is even covered by our unique long-term guarantee!

The positive tile properties are retained.

Tiles are:

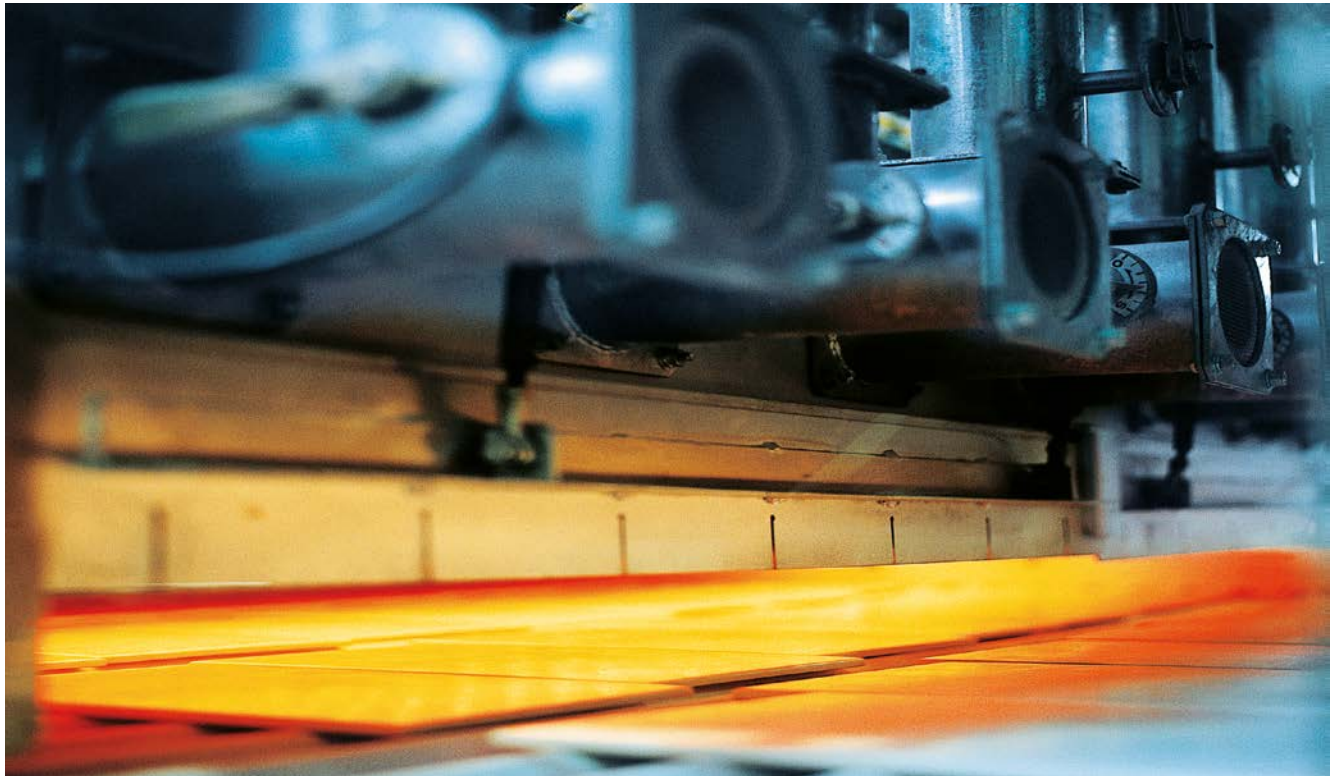
- colour- and light-fast
- incombustible
- free of emissions and solvents
- resistant to chemicals
- antistatic
- thermally conductive

Particularly durable

Ceramic tiles for walls and floors have always been extremely durable and long lasting displaying a wide variety of outstanding product features. They are safe as they do not emit any pollutants and are particularly uncomplicated in terms of care and maintenance. Nor does the HT coating change any of these positive attributes.

Naturally safe

The light-activated catalyst titanium dioxide is a harmless and naturally occurring substance. It is a component of tooth-paste, food and medication, for example. In the factory, it is permanently burned into the glaze at a high temperature thereby bonding firmly with the tile surface.



HT is permanently burned into the surface.

HT technology: **convincing.**



Série : Como, AGROB BUCHTAL

Test certificates

Deutsche Steinzeug collaborates with renowned test institutes which confirm the effects of HT. Simply follow the QR code for the full test reports:



www.clean-air-ceramics.com/testreports

Antibacterial effect:

- Fraunhofer Institute Schmallenberg (ISO 27447)
- Dr. Ralph Derra, ISEGA – Forschungs- und Untersuchungs-Gesellschaft mbH Aschaffenburg

Decomposition of pollutants/odours:

- Fraunhofer Institute Braunschweig (ISO 22197-1)
- Fraunhofer Institute Holzkirchen
- Prof. Dr. Horst Kisch, Friedrich-Alexander University of Erlangen/Nuremberg

Easy cleaning:

- Fraunhofer Institute Braunschweig (ISO 10678:2010)

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