

HT: the revolutionary coating.



## HT: the effect.

Specifying wall and floor tiles with the innovative HT coating determines three significant advantages: the tiles have an antibacterial effect\*, are absolutely easy to clean and capable of eliminating odours. Three arguments which are becoming more and more important in modern architecture.

The antibacterial effect of HT is based on the principle of the photocatalysis. Light activates the oxygen molecules, which decompose bacteria and germs. The HT effect is reversible regenerating itself when exposed to light.

HT makes tile surfaces hydrophilic. Water is not repelled, but spreads to form a thin film on the tile surface. In this way, dirt is washed down and can be easily removed. In contrast to conventional hydrophobic solutions (e.g. Lotus effect), coatings or impregnation, HT is so robust that both wall and floor tiles can be coated with it.

The third function is also based on the photocatalytic principle: disagreeable and harmful odours such as formaldehyde or ammonia are eliminated by the activated oxygen, and thus a lasting improvement of the air quality is achieved. This is also applicable for industrial and car exhaust gases: scientific analyses have shown that 1000 m<sup>2</sup> of HT facade area clean the air as effectively as 70 medium-sized deciduous trees.

\*Documentation and approval regarding the antibacterial characteristics of HT are pending in the USA.





### Effective against bacteria.



HT is predestined for use in areas where hygiene is of the utmost importance. The coating decomposes bacteria, fungi and germs and prevents the development of new pathogens.

### Effective against dirt.



In addition HT-coated tiles can be kept clean without great effort. This permits to reduce the use of cleaning agents and thus their costs considerably, and to protect the environment. Thereby reducing the use of cleaning agents to lower maintenance costs and help preserve the environment.

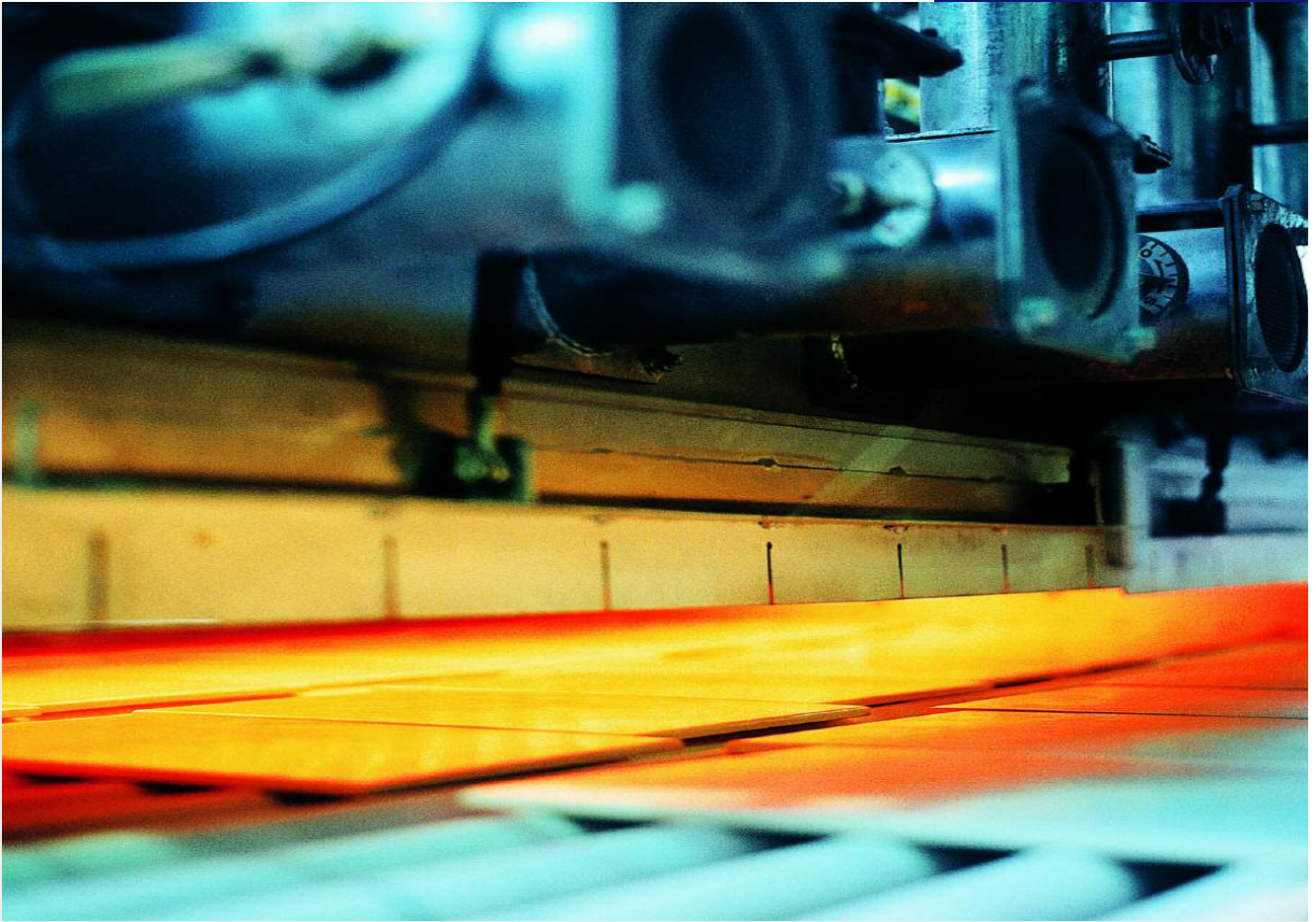
### Effective against odours.



HT eliminates unwelcome odours quickly and thoroughly. This effect is already guaranteed at a normal level of indoor lighting. There are no health risks and secondary effects: according to international tests and analyses, the coating is absolutely non-toxic and free of irritating substances.

### Advantages

- Decomposition of bacteria, fungi, algae, moss and germs
- Elimination of odours
- Improvement of room climate
- The original characteristics of the tile such as e.g. resistance to abrasion, resistance to chemicals etc. are maintained
- Requires only minimum care
- Low cleaning costs
- Free of irritating substances, non-toxic
- Environment-friendly
- Long-term guarantee
- Varied range of products



The ceramic manufacturing process ensures maximum durability. The HT coating is applied at high temperatures to bond firmly with the surface. HT is invisible.

## HT: the basis.

The HT surface is an integrated part of the ceramic manufacturing process. The coating material (Titanium Dioxide) is applied during the glazing and subsequently baked onto the surface of the tile. The photocatalytic reaction is permanent and is activated by a normal level of indoor lighting.

Convincing: the photocatalyst initiates a reaction between light, oxygen and humidity. Oxygen molecules become active thereby providing the basis for the HT effect. No potentially harmful materials are used – Titanium Dioxide ( $\text{TiO}_2$ ) is contained in many household products such as lipsticks and toothpaste.



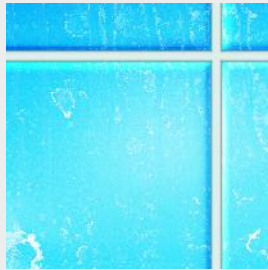
## HT: the principle.

Activated oxygen molecules are capable of decomposing microorganisms such as bacteria, fungi, algae, moss or germs. The tile surface becomes hydrophilic thereby releasing the surface tension of the water globules to form a thin film while lifts dirt from the surface to ensure easy cleaning.

### Conventional tiles

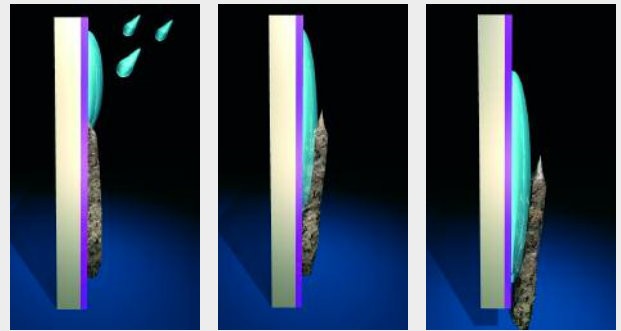


Water drops form ...



... and dirt is left on the surface after drying.

### No chance for dirt, oil and grease

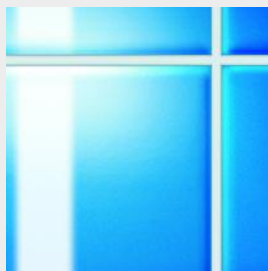


With HT, dirt is washed down by the water and can then be easily wiped off.

### HT-coated tiles



The water spreads as a thin film on the surface and lifts dirt from the surface ...



... which can then be easily removed. Result: a clean surface.



Oil and grease detach from the surface.

## HT: the use.

No matter whether used for walls, floors or facades: tiles with HT coating offer not only unique product characteristics, but also unlimited design possibilities. AGROB BUCHTAL's range of products comprises a wide variety of sizes, colours and surface structures and in this way permits individual and creative solutions for every application and functional area.

### Catering trade and food processing



#### Clean working environment.

In kitchens and canteens, restaurants and cafeterias a hygienic environment can be ensured by HT-coated tiles thereby making an odour free, healthy working environment. Planners and architects can ensure these standards are met by specifying HT coated tiles.

### Medical areas



#### Speedy recovery.

Absolute hygiene is utmost importance in hospitals, clinics and doctor's practices, operating theatres and nursing homes. The antibacterial properties of HT tiles are significant. Germs, bacteria and fungi are decomposed, and the risk of infections in operating theatres and hospital rooms is reduced.

### Swimming pools and wellness areas



#### Pure pleasure.

Fun and sports pools, fitness centres, whirlpools or Finnish saunas: workout and relaxation are only fun in a clean environment. In all these areas, HT-coated tiles are convincing in every respect. Surfaces are easy to clean and use of cleaning agents can be restricted thereby reducing maintenance costs and helping preserve the environment.





### Facades



#### Brilliant impression.

The HT effect has proven to be particularly effective in rain screen cladding projects. Sunlight ensures a particularly intensive photocatalytic reaction. The antibacterial surface helps decompose algae, fungi and moss. Rain lifts dirt and impurities from the surface. As opposed to normal cladding materials, where maintenance costs increase with time and appearance wears, HT-coated products ensure an ageless appearance and long term minimum maintenance.

### Representative areas



#### Stylish ambience.

The first impression is decisive. No matter whether in showrooms, foyers or in other representative areas – HT-coated tiles ensure a first-class atmosphere. And ease of maintenance ensure these sophisticated premises are kept appropriately.

### Bathrooms/Sanitary rooms



#### Fresh air.

With HT, the typical disagreeable odours in bathrooms or sanitary facilities are a thing of the past. Because the bacteria causing the odour are decomposed quickly and thoroughly. The result: perfect cleanliness and fresh air in sanitary areas.

## In-House Planning Department: competent support.

At AGROB BUCHTAL, high-quality products and competent services are supplied. In this way, planners and architects using our products can benefit from the know-how of our in-house planning department free of charge when specifying our products.

A committed team of qualified technicians, engineers, architects, designers and colour experts ensures a quick and problem-free realization of individual concepts. The range of services includes laying plans, determinations of quantities, detailed estimates, texts for bidding purposes or project-specific advice regarding application techniques on the project location. In addition, a person to contact will be at your disposal by request. You will find detailed information about the complete range of our products in our publication "Programme of Delivery".



### AGROB BUCHTAL GmbH

Buchtal 1  
D-92521 Schwarzenfeld  
Telephone: +49 (0) 94 35-391-0  
Fax: +49 (0) 94 35-391-35 55  
E-Mail: [agrob-buchtal@deutsche-steinzeug.de](mailto:agrob-buchtal@deutsche-steinzeug.de)

### Deutsche Steinzeug America, Inc.

367 Curie Drive  
Alpharetta, GA 30005  
USA  
Telephone: +1 770 442 55 00  
Fax: +1 770 442 55 02  
E-Mail: [info@dsa-ceramics.com](mailto:info@dsa-ceramics.com)  
[www.dsa-ceramics.com](http://www.dsa-ceramics.com)

You will find contact names for  
other countries on the Internet at:  
[www.agrob-buchtal.de](http://www.agrob-buchtal.de)

