

## A paint must do more than just look good!

Bioni-Shield C.C.S. GmbH, headquartered in Oberhausen, Germany, develops, produces and markets paints and coating systems that are based on the latest scientific developments. It is our objective to produce products distinctive by virtue of their high quality and efficiency; products that guarantee their user maximum service. Bioni-Shield relies on the fields of Bionik and nanotechnology to accomplish

this objective. In order to be objective about the demands we place on quality we decided from the beginning upon the use of external monitoring and the independent assessment of our products.

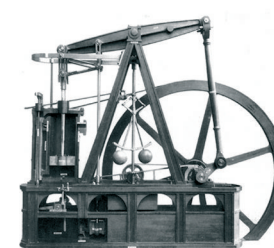
We are thus able to provide proof of the properties of our systems, determined by the following institutes and organizations: ►

- Materialprüfanstalt für das Bauwesen Hannover (MPA)
- Fraunhofer Institut für Bauphysik Holzkirchen
- TÜV Produkt & Umwelt Köln
- RW-TÜV Essen
- Institut für Bauforschung Aachen
- Forschungsinstitut für Pigmente und Lacke Stuttgart
- Forschungs- und Entwicklungsgesellschaft Lacke und Farben
- LPM AG Schweiz
- Güteschutzverband der Betonindustrie
- Institut für Fenstertechnik
- Bayerisches Zentrum für angewandte Energieforschung
- Dubai Municipality - Central Lab.



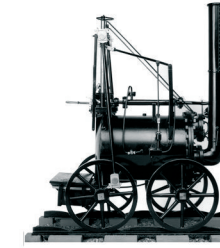
**1769**

**Steam Engine**  
(James Watt)



**1803**

**Locomotive Engine**  
(Richard Trevithick)



**1854**

**Light Bulb**  
(Heinrich Göbel)



**1876**

**Telephone**  
(Alexander G. Bell)



**2004**

**Intelligent Coatings**  
(Bioni-Shield)



Bioni-Shield distribution network

**Nanotechnology**  
**BIONIC**  
**Functional Coatings**



**Bioni-Shield Inside**  
Interior Coating

### Characteristics

- permeable to water vapor
- flame resistant
- free of solvents
- regulates heat and humidity
- superior washability
- excellent flow and very good hiding
- free of plasticizers and softeners
- very good adhesion
- environmentally friendly
- possesses crack-covering capabilities



**Bioni-Shield Outside**  
Exterior Coating

### Characteristics

- reflects incoming sun rays (93%)
- permeable to water vapor
- excellent water resistance
- crack-bridging ability
- resistant to UV light
- salt and carbon dioxide resistant (prevents concrete corrosion)
- flame resistant
- very good adhesion
- environmentally friendly
- excellent colour stability



**Bioni-Shield Roofing**  
Roof Coating

### Characteristics

- reflects incoming sun rays (90%)
- water proofing against rain
- permeable to water vapor
- crack-bridging ability
- resistant to UV light
- flame resistant
- very good adhesion
- environmentally friendly
- excellent colour stability

Oberhausen, **Germany**  
Chur, **Switzerland**  
Zandhoven, **Belgium**  
Lochem, **Netherlands**  
Barcelona, **Spain**  
Athens, **Greece**  
Vero Beach, **USA**  
Dnepropetrovsk, **Ukraine**  
Naklo, **Slovenia**  
Vilnius, **Lithuania**

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**Bioni-Shield**

Intelligent Protective Coatings for Buildings



# Bioni-Shield - Intelligent **INTERIOR** Coatings

*nanotechnology  
bionic  
► functional coatings*

**NANO-Technologie**



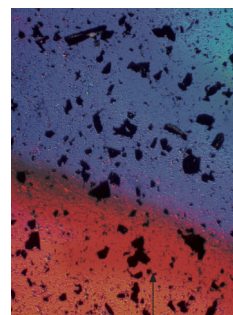
**NEW !**

Interior Coating

## ► Prevents the formation of mould by means of NANO-TECHNOLOGY!

The formation of mould in buildings is a great problem throughout the world. Walls covered with mould not only look unpleasant; the micro-organisms which are present also put the health of the occupants at risk and can cause chronic illnesses such as asthma or allergies.

Bioni-Shield Inside is the first paint in the world which prevents the formation of mould on walls by means of nanotechnology. The key benefit offered by Bioni-Shield Inside is that the mould is defeated by tiny, highly effective nano-particles which, in stark contrast to conventional anti-mould paints using toxic additives, are entirely nontoxic and are effective indefinitely.

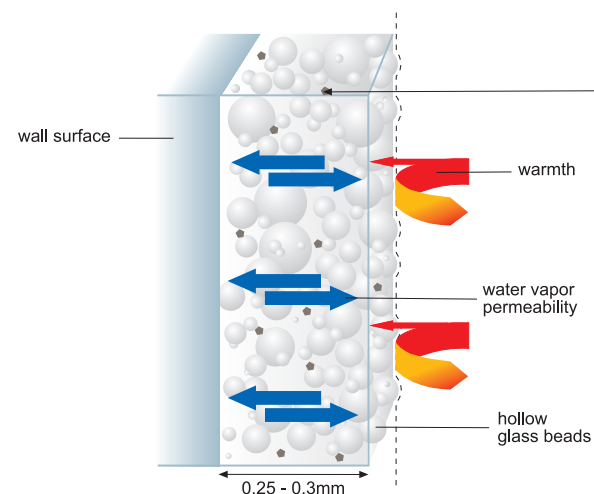


nano-particles

## ► Improves the atmosphere in the room and regulates the room climate

Bioni-Shield Inside is the first paint for interiors with effects that you can actually feel. Millions of microscopically small, hollow glass spheres in every litre confer the coating with characteristics which regulate heat and moisture and ensure a noticeable improvement in room climate.

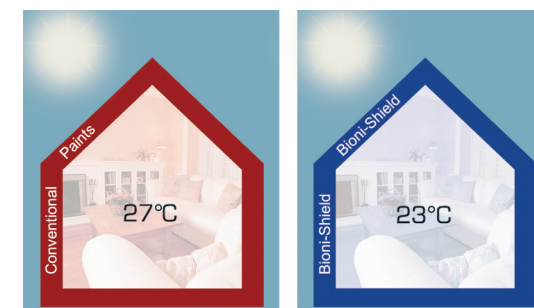
Humidity and temperature are held at a constant level. This not only increases the feeling of comfort in the room, but also lowers air conditioning costs thanks to the characteristics of the coating which regulate the climate.



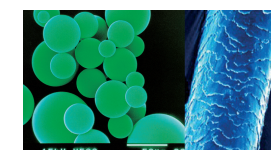
## ► Lowers the cost of energy used for air conditioning!

Bioni-Shield exterior coatings offer effective protection from the heat of the sun, thanks to their highly reflective surface technology.

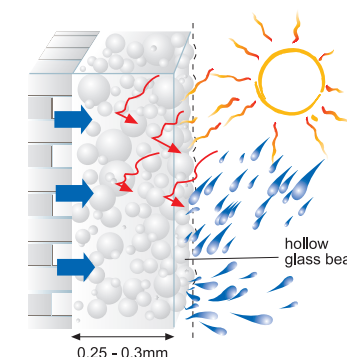
Due to its expanded surface, the coating reflects up to 93% of incident sunlight. This property, when considered in combination with its significantly lower thermal conductivity in comparison with conventional paints, means that Bioni-Shield ensures lower temperatures inside the building and permanently reduces air conditioning costs.



The glass beads suspended in the coating have a smaller diameter as a human hair.



There are roughly 1 billion hollow glass beads in every litre of Bioni-Shield coating.



**Membrane-Technologie**



**NEW !**

Facade Coating

**Protect-Technologie**



**NEW !**

Roof Coating

## ► Provides long term protection for the building!

Buildings and structural facilities, particularly those in southern regions, are exposed to extreme climatic influences. These include heat, UV radiation, moisture and salty air. Only effective coating protection will avoid the high cost of renovation and repairs while counteracting these various stresses in a regulating manner.

Bioni-Shield facade and roof coatings have been developed to accomplish just such feats. Their climatic regulating characteristics, extremely high durability, and longservice life make these products real problem solvers all around the house. Bioni-Shield coatings have what it takes to satisfy the highest demands for quality and efficiency and combine highperformance raw materials with minute glass beads that make these products clearly stand apart from conventional paints.

# Bioni-Shield - Intelligent **EXTERIOR** Coatings

*nanotechnology  
bionic  
► functional coatings*