

**Photocatalytic, transparent, light-activated, permanent coating** for long-lasting antimicrobial shielding

## Product:

**SurfaShield MBC**

## Applications:

- Light-activated, long-lasting protective transparent coating, based on photocatalytic TiO<sub>2</sub> nanocrystals
- Applied only on disinfected surfaces
- Light-induced, uninterrupted, antimicrobial protection of screens, ATMs, lift call buttons, control surfaces, button boards, cases, masonry, painted walls, benches, inox, knobs, rails, wall guards, trolleys, keys, phone cases, furniture, textiles

## Advantages:

- Permanent chemical anchoring of active ingredients
- Continuous, light-induced, antimicrobial action, even for 6 weeks, on a single coating
- Active with both Interior & Exterior light conditions
- Texture & Appearance of application substrate remains unchanged
- Easy application without heat treatment steps

## Packaging:

- 750ml (25.36 fl.oz.) PET Trigger Bottle
- 3L (0.8 US gal) Plastic Canister



# SurfaShield MBC

## Photocatalytic Coating for long lasting Light Induced, Antimicrobial Shielding

SurfaShield MBC is a unique **titanium<sup>IV</sup> dioxide nanoparticles suspension**, which upon application, **anchors permanently** on the application substrate. SurfaShield MBC is not a disinfection cleaner: it is a permanent invisible **microbe shielding coating**. Due to its photocatalytic nature, the resulting nano-coating gets **light-activated** and **protects against the growth of microbes and fungi** that dare "touching" the treated area.

Third-party lab testing has proved that the rate of SurfaShield MBC microbe reduction is 55 CFU per minute per square centimeter (CFU stands for colony-forming unit in microbiology), under the illumination of four tubular, 58W fluorescent lamps. Indicatively, one of the real-life, most contaminated surface areas, i.e., elevator button counts 313 CFUs per square centimeter; 40 times as many germs as a public toilet seat.

Based on the above, SurfaShield MBC presents **exceptional antimicrobial performance, even in interior light conditions**. Nevertheless, the application of SurfaShield MBC takes place only on clean and disinfected substrates for better surface anchoring and prolonged service time, which **can reach even 45 days**. After application, substrates can be frequently used, and SurfaShield MBC does not lose its antimicrobial efficacy, even if conventional (non-corrosive) cleaners are used. Abrasion loads that might even harm the substrate should be avoided.

Interior use of SurfaShield MBC also elevates the Indoor Air Quality, by eliminating odors and harmful volatile organic compounds. SurfaShield Microbicide oxidizes NO<sub>x</sub> and SO<sub>x</sub> toxic compounds as well.

**International Standards Testing:** Antibacterial Action (ISO EN 27447): Deactivation of bacterial microorganisms E. coli (ATCC 51813): 98,92%, Listeria monocytogenes (ATCC 19115): 99,89% and Staphylococcus aureus (ATCC 6538) 99,68% within four hours of exposure under environmental light of intensity: 55,6 μW.cm<sup>2</sup> (360-420nm). Antifungal Action (ISO EN 27447): Deactivation of fungi microorganisms Aspergillus kai Penicillium spores: 87,27% within four hours of exposure under environmental light of intensity: 55,6 μW.cm<sup>2</sup> (360-420nm). Removal of nitric oxide (ISO 22197-1:2007): Photocatalytic activity was measured as the oxidation of NO under UV light (350 nm, 10 W.m<sup>2</sup>). NO gas is adsorbed on the photocatalyst surface and is oxidized producing nitric ions (NO<sub>3</sub>).

### Application:

Shake or stir the canister vigorously before use. The application surface should be dry, clean and disinfected. Apply SurfaShield MBC by a brush, roller, or spray gun. No dilution is required. If any excess remains on the application surface, remove gently by using a clean cloth. Allow SurfaShield MBC to cure for 30 minutes before allowing proper use of the treated substrate. Full curing and active ingredient surface anchoring takes place in 4h after application, at 20°C (68°F). After proper curing, avoid scratching, impact, and abrasion loads on the treated surface that may even harm the application substrate.

### Safety:

Refer to the safety Data Sheet or the Globally Harmonized System of Classification and labelling of Chemicals (GHS) statements on the label of the packaging.

SurfaShield MBC® is a registered trademark of **NanoPhos SA**

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