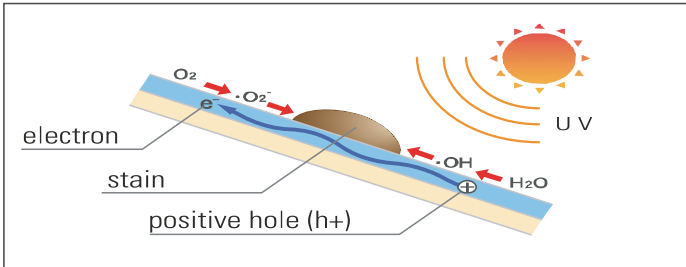


THE POWER OF LIGHT providing persistent anti-pollution and hygienic action

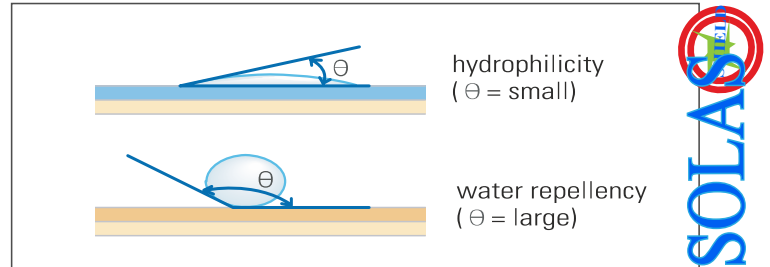
In the presence of any visible, natural or artificially provided light source, the titanium dioxide (TiO₂), through the fusion on the **Solas Shield™** micrometric particles, develops a strong antipollution and bactericidal action through the natural occurring photocatalysis process.

The reduction of atmospheric pollution and the bactericidal action of the TiO₂ are fully documented and unanimously recognised by scientific communities, exalted for both the exclusive manufacturing process and the application methods used to adhere the TiO₂ particles onto the intended surfaces...and no binders used! This method is free from any danger of dust inhalation for both production operators and application processes... This product and associated application and adhesion processes are totally non toxic in character.



Photocatalytic Decomposition Process:

This reaction stimulates the development of a ctive oxygen species... such as highly oxidative hydroxyl radicals (·OH) and Super-oxide radicals (O₂⁻) resulting in the decomposition of any organic matter through a natural occurring oxidation process



Photocatalytic Hydrophilicity Process:

This reaction causes moisture to be absorbed from the air, Forming hydrophilic radicals As a result, the treated surface becomes hydrophilic- allowing rain to be swept away from the material surface. This action prevents the formation of rain-streak stains on the surface of the treated facade.

Hygienically Clean & Safe Environments

Tests performed on **Solas Shield™** guarantee their use both for any outdoor facade coatings and for indoor floor, ceilings, walls and lights. Thus it can also be used for public buildings with intensive trafficked areas.

Thanks to their unique properties, **Solas Shield™** treated surfaces which are suitably illuminated by visible, UV or artificial light, are particularly suitable for use in all homes,, wellness centres, hotels, hospitals, restaurants, gyms, schools, health centres and laboratory Clean Rooms etc. etc.

That really means in all areas and environments where high levels of cleanliness and hygiene are required.



Solas Shield™ can make an active contribution to help create a better atmosphere for a cleaner and healthier environment for all residents of planet earth

Solas Shield™ treated surfaces of Buildings and Vehicles can significantly..

- reduce the harmful effects of the main atmospheric pollutants (CO/ NOx / SOx & VOC).
- reduce Particular Matter (PM) 2.5 - 10 and eliminate most of the dangerous bacteria regarded as detrimental to human health.
- reduce dust adhesion - by the treated surfaces having anti-static properties.

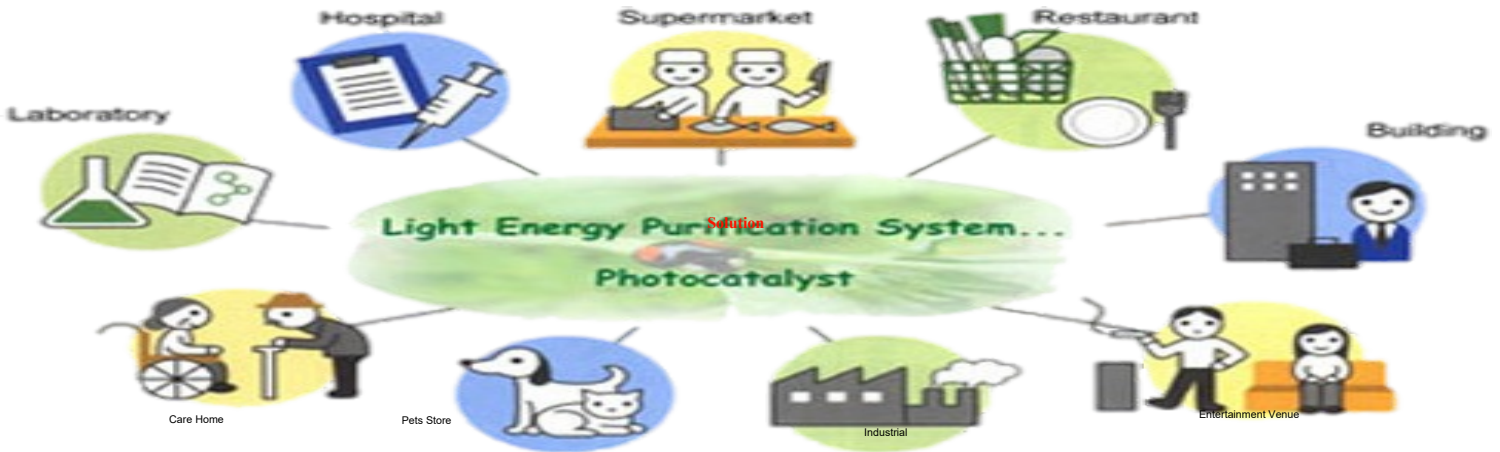
With **Solas Shield™** the treated surfaces are enriched with the exceptional property of interacting with the environment, contributing to purify the air that we breathe and eliminating the bacterial load on all the surfaces where we all work, live and play.



Live Green with Solas Shield™

With the reduction of nitrogen oxides (NOx), it is estimated that 1.000 m² surface area treated with **Solas Shield™** and radiated by Sun / Visible Light will have the same and equal effect to that of 20 trees.

A 25 m² wall and or floor with **Solas Shield™**, properly illuminated, In addition to almost totally eliminating the bacteria that rest on it, is able to substantially reduce the pollutants present in the air, to the same extent as an average sized tree planted in the middle of the same surface area



Clean Cities & Towns

Outdoor surfaces treated with **Solas Shield™** will be activated to provide the following actions:

- Dirt repellent, as photocatalysis prevents smog from settling on them.
- Eliminates the need to use detergents, which is yet another antipollution effect. A simple wipe with a clean cloth and water, or just rain on the wall...and the dirt just slips away!
- Significant reduction in smells, as a result of the elimination of bacteria, moulds and fungi odours
- UV (>95%) reduction that protects your assets from discolouration and deterioration.

Purification of Environmental Pollutants

NOx Reduction Process...

Decomposes Nitrogen and Sulphur Oxide (NOx, SOx) contained in vehicle exhaust and other sources providing significantly purified air.




Results of NOx reduction on photocatalytic treated surfaces or structures based on documented JIS testing standards criteria:

NOx removal volume per hour utilising 1000m² of TiO₂ treated surface
 NOx removal volume = 1,00(µmol/50cm²/5h translates to 12g/1000m²/h

(1) Based on approved vehicle exhaust gas by the Ministry of Land Infrastructure and Transport.

(2) Removal performance is based on the capability to remove NOx being emitted during an hours drive at an average speed of 10-15 mode (22.7 kmh)

Gross Vehicle Mass(*1)	NOx Emission Factor(g/Km)	NOx discharge (per/vehicle/hr)	NOx removal volume per 1000m ² in terms of number of vehicle(*2)
Truck/Bus (1.7~3.5t)	1	46	1.7 vehicles 
Car	0	232	2.6 vehicles 