



Liquid Glass

The following information is a very brief overview of the characteristics of liquid glass nano technology.

Nanoland, are world leaders in SiO₂-Liquid Glass Nano Layering Technology. This technology is changing how we manage our environment, offering replacements to aggressive cleaning chemicals, new solutions for infection control, seed enhancements, asset protection, public health and food hygiene.

In essence, liquid glass *is one of the world's most exciting new technologies!* It is recognised that this may be a rather bold claim but it is made with total justification as we provide a technology which allows the user to create long term, easy to clean, bacteria free surfaces using an ultra environmentally friendly and low cost technology.

Our smart fluid treatment has enormous interest on account of their wide range of functionalities-

- The SiO₂ (= silicon dioxide) = the chemical term for glass.
- Liquid glass is invisible to the naked eye, as it is only 100nm thick- (approximately 5,000 times thinner than a human hair) The coating does not alter the appearance or texture of the treated surface.
- SiO₂- "liquid glass" can be applied to all surfaces, (including glass, metals, fabrics, stone, plastic food packaging, operating theatres, computers, food processing areas, cars, shipping, aircraft; in fact the list is almost endless. (Unsurprisingly our clients are informing us about new applications almost daily.) It should be stressed that our technology has been extensively tested, by leading international testing agencies.
- Liquid glass is applied by spraying, dipping, wiping .
- It is food safe and mucosa friendly and has no negative physiological impact.
- It is super-phobic (rejects all soiling elements, including solvents, acids and alkalis up to 12.5 ph)
- It is highly durable; domestic quality variants last approximately one year per application. Professional variants last up to 5 years. Certain treatments last even longer.
- It is heat tolerant(-80 to 450° C) and so can be applied to ovens, freezers, wash basins etc (removes the need for oven cleaning chemicals) simply clean ovens with water and a cloth.
- It is UV stable and the nano layer is completely inert. (This is after all pristine glass.)
- It is particle free (does not contain any potentially dangerous nano particles .)
- It is flexible (200%) and breathable at the molecular level and so it can be applied to stone work and statues as these areas need to be able to breathe and expand /contract.

- It can be applied with great ease ,no special equipment is needed.
- All surfaces become "easy to clean", and in most instances cleaning can be carried out with water alone. (This is the case within butchery departments, where NP coated areas are cleaner after being washed with water than those which have been cleaned with bleach.)
- Treated surfaces become "bio-static " through ionic exchange (this creates an environment which will not support bacterial growth) and so the treatments are ideal for sinks, taps, food prep areas, nurseries, door handles, toilets, cash registers, conveyor belts, Gyms, schools, hospitals, chiller cabinets etc. We do supply an anti bacterial variant which satisfies ASTM E 2180.The anti bacterial variant kills bacteria for the life of the coating. Most anti bac treatments are short lived or exceptionally expensive. We offer savings of over 1000% on items such as anti bacterial light switches, and mobile phones, for hospital staff.
- This technology is new to the UK / Ireland but we already work with some of the world's largest organisations. Smart fluids have been applied successfully to Austrian and UK trains, both inside and out, The Kempinski hotels, McDonalds (Austria) Spar food processing factories, bakeries, health care environments etc. These products are now being trialled for janitorial use in some of the UK's leading supermarkets.
- We provide a range of specialist products such as anti corrosion ,anti graffiti, anti fingerprint, skin protection, cork protection and variants for plants. Some of these variants offer protection which can be measured in 10s of years and can prevent metal wear to engines, pistons, bearings and gears

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