GUARDIT SOLUTIONS

Permanent Anti Graffiti Coating

Who We Are

EcoBarrier™

- In 2010 NTS Coatings acquired the exclusive rights for EcoBarrier in Australia.
- EcoBarrier was developed by leading nanotechnology group Nanokote Pty Ltd.
- Nanokote is a division of Australian company Micronisers Pty Ltd founded in 1987. Micronisers specializes in manufacturing nanotechnology-based products that are supplied to its customers as an ingredient in a final formulation. Extensive research with the CSIRO (Australia's preeminent scientific research organization) has resulted in numerous patents and state of the art commercial products. Micronisers is one of very few true nanotechnology companies that are successfully manufacturing and commercializing nanotechnology products.
- Micronisers have manufacturing and sales offices in Australia, Thailand, Malaysia, Indonesia, China and the UAE.
- NTS Coatings has 10 years experience in coating technology and application experience. The company supplies product and application for architectural and infrastructure projects Australia-wide.

What is Nanotechnology?

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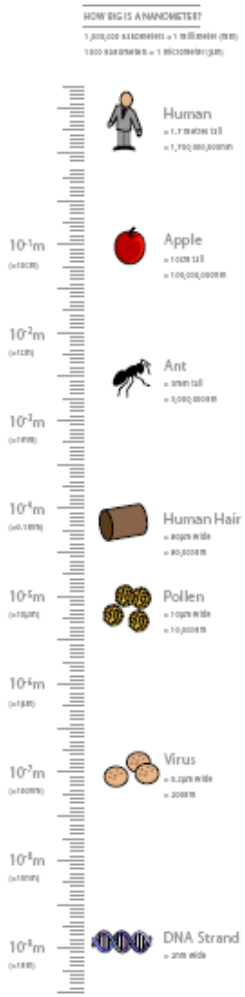
Nanotechnology deals with the study of molecular and atomic particles, a world tha is measured in nanometers (billionths of a meter or 10^{-9}) and is 1000 times smaller than the human eye can see.

Working at this nano scale specifically designed molecular architectures and intelligent structures can be created.

These supra (nano) molecules provide superior, performance-enhancing attributes such as stronger, smoother, longer lasting, more flexible, smarter and less expensive surface coatings

At this scale substances can be created that form a very strong, permanent bond with the surfaces to which they're applied. In fact, in many ways they're really an extension of the surface itself, and the only way to remove them is to physically etcl the surface.

By binding mineral and metal nanoparticals into our coating technology we are able to provide coatings that can perform a specific function be it anti-bacterial, ant fungal, anti stick etc…



Anti-graffiti coatings - History

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Anti-Graffiti Barriers

•Not usually possible to prevent graffiti, removal methods must be both efficient and fast.

•The best method of easing graffiti removal is generally agreed to be the insertion of a barrier between the surface and the defacing material, such as paint spray, crayon or marker pen.

•Anti-graffiti barriers and coatings fall into three distinct categories.

Sacrificial Anti-Graffiti Coatings

•Sacrificial coatings are mostly based on easily removable waxes. After soiling with graffiti, both the wax and graffiti are removed together, sometimes with solvents or more commonly by melting the wax with steam or hot water.

•The biggest problem with this approach is that the coatings must be replaced after each removal operation, which is time consuming and expensive.

Semi-Permanent Anti-Graffiti Coatings

•Semi-permanent coatings are commonly based on acrylics or cross-linking systems, such as epoxy, urethane or polyester. They can be multi-coat systems that possess a moderate degree of resistance to aggressive cleaning chemicals.

•These coatings will normally withstand a few graffiti-removal operations with strong chemicals, but eventually attack by the removal chemicals makes replacement necessary.

•Aggressive removers are necessary as the marking media usually has some affinity for the coating and a degree of adhesion or diffusion of the marking media takes place, which tends to increase with time.

Permanent Anti-Graffiti Coatings

•Permanent coatings are relatively new and offer an extremely long-life surface from which graffiti, fly-posters and other soiling can be removed repeatedly, using safe and mild agents, without the loss of properties, performance or appearance of the coating itself. Coatings of this type normally have release properties similar to those of non-stick domestic kitchenware. Any soiling can easily be removed using aqueous cleaners.

Anti-graffiti coatings - Future

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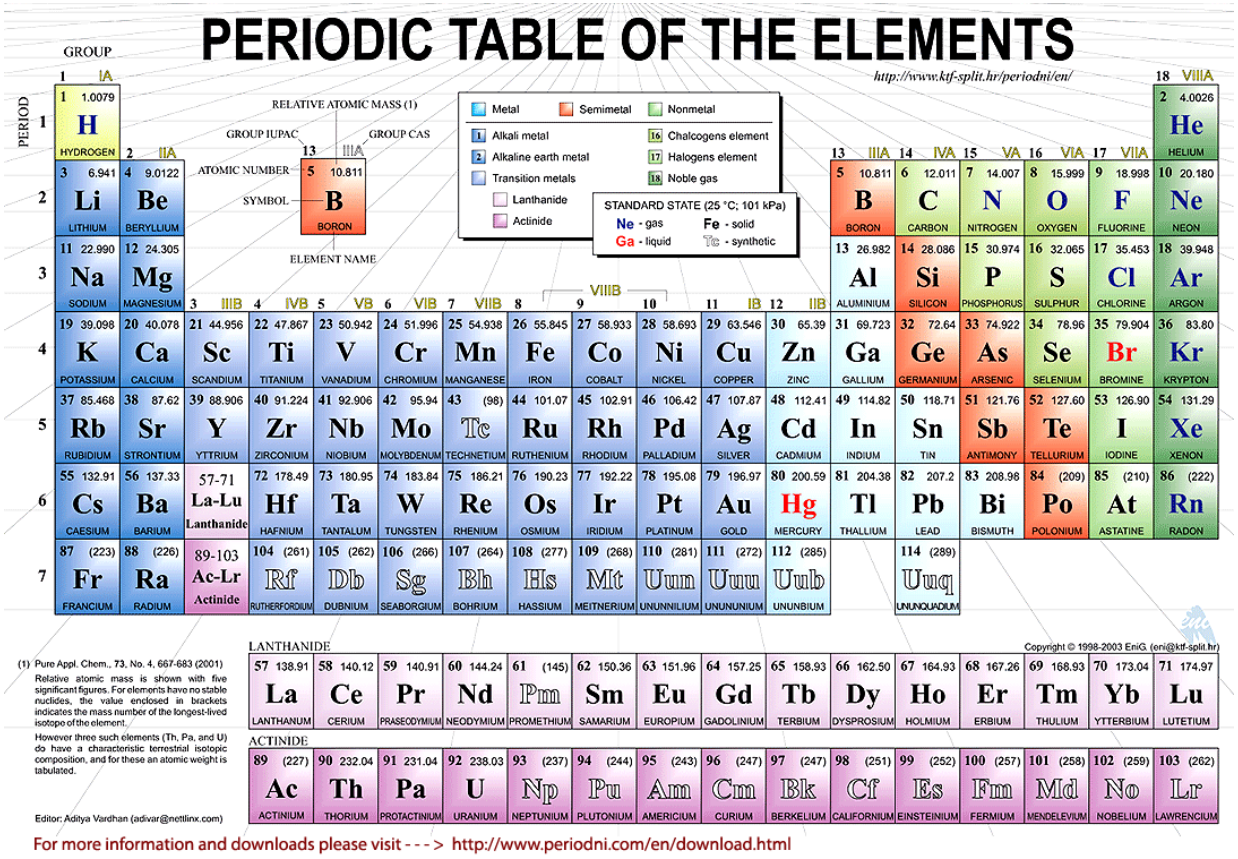
Major difference – Organometallic bonding – NK-M1AG.



Coating application is achieved via spraying or rolling onto a clean, uncontaminated new surface. The coating is self levelling and transparent . Once applied curing to touch dry in 4 hours dry through time will occur within 24 hours and full hardening over 7 days.

Once applied, no further attention is required.

Once applied the coated surface will not fade or oxidise. The surface will be extremely easy to clean as the cured surface coating presents a non-stick finish that is permanent.

Our coating will reduce the need to use harsh detergents and water in order to clean the surface. Paint, permanent marker, rust stains, bird droppings, bugs, salt etc, oil etc are easily wiped off.

Once fully cured the coating is extremely tough yet flexible and will not flake, peal or discolour.

Proprietary application methods are not required.

The coating is applied as a very thin permanent barrier. Typically the coating, when fully cured does not exceed a thickness of 10 microns. Depending on surface porosity, 1 litre of product will cover an average of 40 – 60 square meters.

The coating can be applied to just about any surface (porous and non-porous) including wood, brick, render, aluminum, stainless steel, composite materials, gel-coat, painted and non painted surfaces etc

FEATURES

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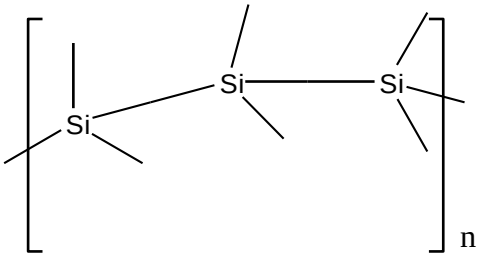
- Once applied the coating is permanent!
- Easy application, no proprietary application methods

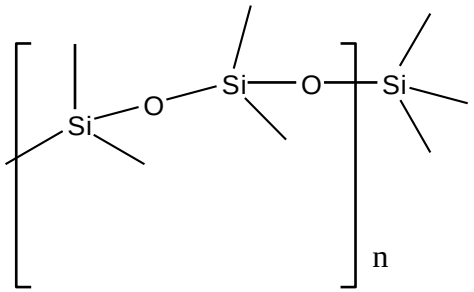
•Spray, roll or brush application

The surface is permanently protected against graffiti and ghosting.

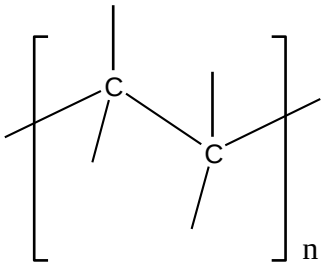
- Stops fading and oxidising of the treated surface
- Stops corrosion
- Low maintenance, easy to clean coating
- Reduced maintenance costs
- Extremely chemical resistant
- Protects the surface from UV fading and will not break down with UV radiation
- Scratch resistant
- Stain resistant
- Reduced need for chemical cleaners
- Asset protection
- Environmentally friendly coating that reduces the need to use detergents pollution our waterways

Polysilanes and polysiloxanes





Organic coatings – polyurethanes, epoxys etc



Existing Organic Anti-Graffiti Coatings

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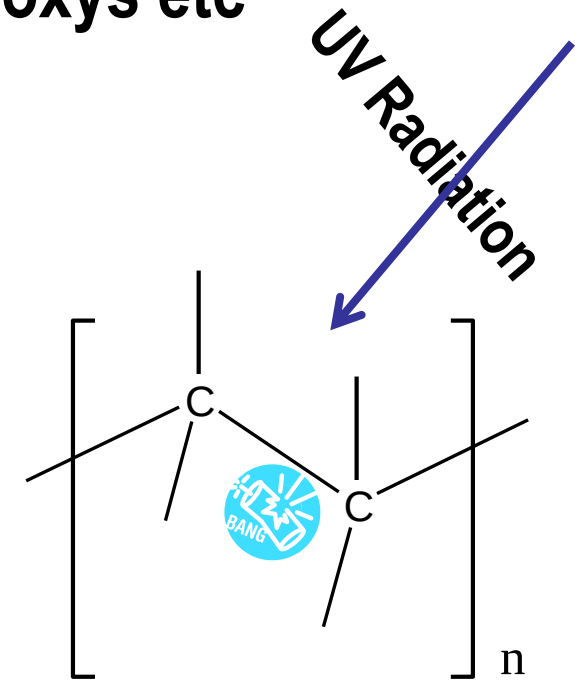
Organic coatings – polyurethanes, epoxys etc



NK-M1AG

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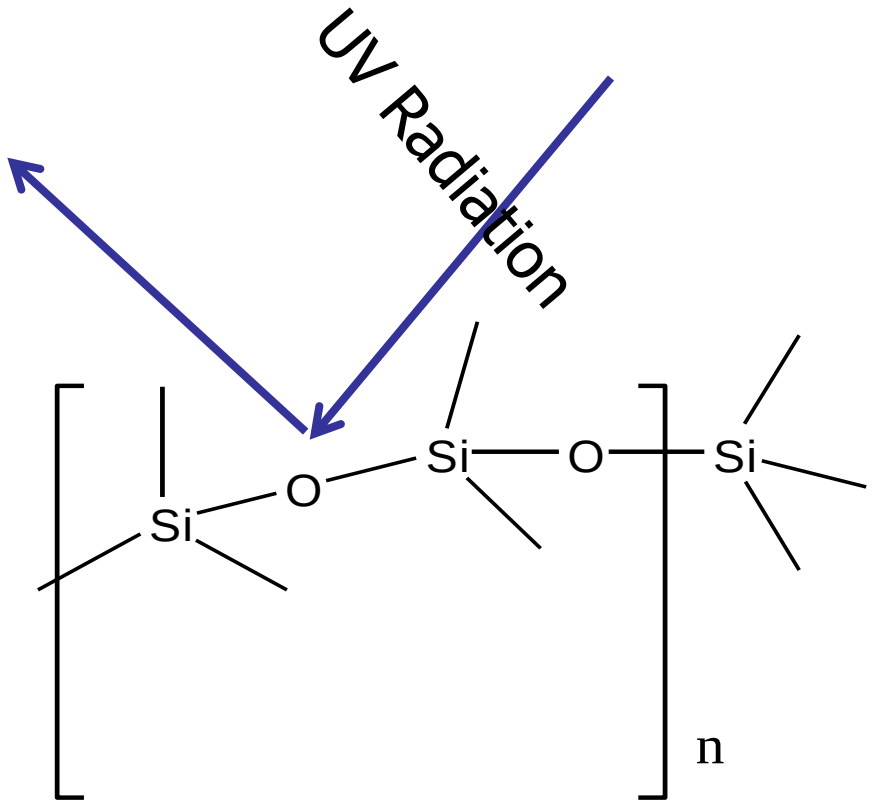

Hybrid Coatings

EcoBarrier™

- Silane or Siloxane + PU
- Silane or Siloxane + Epoxy resin
- Silane or Siloxane + Acrylic

- Gloss or Matt finish
- With UV inhibitors or without

Application of NK-M1AG

EcoBarrier™

- Industrial application (1 part product)
- Professional application (2 part product)
- Drying times. Temperature dependant
- Substrate preparation is important – porous concrete..

Thank you for your time

Questions?