

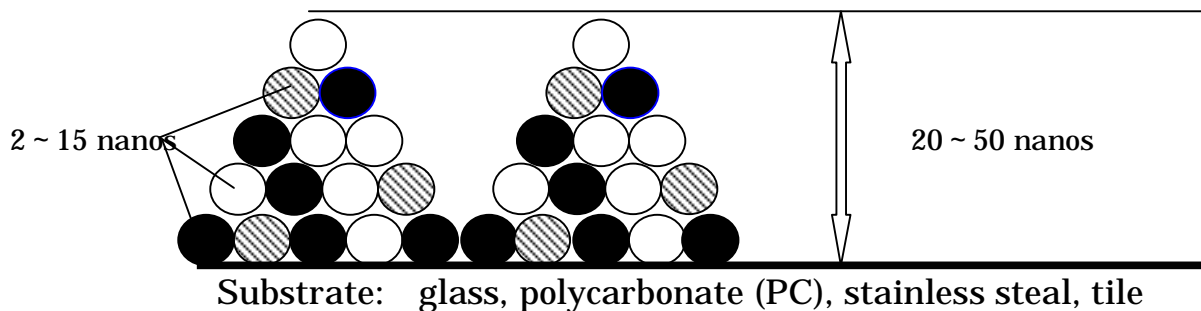
Super-Hydrophilic, Stain Resistant Coating

That Oxidizes Grime and Prevents Static Electricity

SCV-S & GlassGuard

Three Revolutionary Functions

1. It has been discovered that super-hydrophilic particles have powerful self-cleaning characteristics due to the synergistic increase in hydrophilicity that results from both the effect of fractal theory and the nature of the polymers.



Fractal theory refers to the theory that the hydrophilic effect is increased by the minute variations of the surface

2. Protection Against Build Up of Static Electricity through Dissipation of Electrons

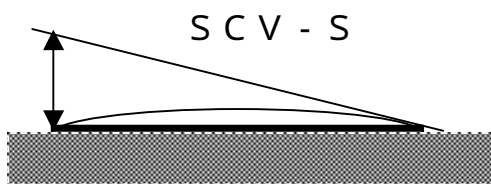
Ultra-fine particles of tin oxide (SnO_2) have a large number of free electrons and a low electronic resistivity value (surface resistivity of $10^8 \sim 10^{10} \Omega/\square$). As a result, surfaces coated with tin oxide tin do not attract ambient dust particles and dust and exhaust gas find it difficult to attach to the surface.

3. A compound of titanium phosphate that breaks down organic matter with water and air as the only catalyst has been added. This breaks down stains and preserves the hydrophilic effect for a longer period of time. Moreover, the product has proven effective

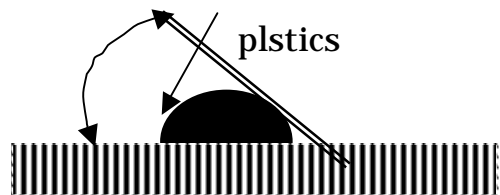
as an antibacterial, anti-mold and deodorizing agent which helps to continuously preserve a clean environment. This anti-stain feature is evident even in the absence of light.

Stain Prevention Function – Which is better for stain prevention – hydrophilic or hydrophobic?

Hydrophilic means that the angle of The water droplet is 10-15 degrees.



Hydrophobic means that the angle of the water droplet is 75-90 degrees.



Measure the angle between a surface and a water droplet dropped onto such surface

If the angle is less than 20 degrees, it is hydrophilic.

If the angle is less than 10 degrees, it is super-hydrophilic.

If the angle is 70-110 degrees, it is hydrophobic.

If the angle is 130-180 degrees, it is super-hydrophobic.

Coating Type	Water Droplet Angle	Characteristic
RainSlip	150°	Keeps surface clean, but today does not adhere well
Teflon	110 ~ 115°	Easy to remove dirt and stains
Fluorinated Plastic Coatings for Construction Uses	100 ~ 105°	Easily becomes dirty
Silicon coating	100 ~ 107°	Easily becomes dirty
Acrylic Urethane Coating	85°	Easily becomes dirty
NOF Corporation VeryClean Coating	30 ~ 40°	Resistant to becoming dirty
Titanium dioxide	~ 10° ~	Super-hydrophilic

coating		self-cleaning coating with photocatalytic oxidation
Our New Coating – SCV-S	~ 10° ~	Super-hydrophilic self-cleaning coating with photocatalytic oxidation and prevention of static electricity.

We can study the relationship between water droplet angle and stain removal by spraying water onto a surface to which a carbon stain has already been attached (carbon being a representative organic stain). The smaller the angle between the water droplet and the surface (and, thus, the greater the super-hydrophilicity), the more difficult it was to stain the surface and the easier it was to remove the carbon stain from the surface.

