

Aculon® Glass Repellency Treatment

Product Information

Aculon® Glass Repellency Treatment nano-scale repellency product is a surface treatments capable of imparting hydrophobicity and oleophobicity to a wide variety of surfaces in simple, one-step process. They are designed for surface treatments on most glass, silicate hardcoated plastic, and ceramic parts. This product is can be applied by dipping, wiping, flow coating and spray applications, producing a hydro/oleophobic film that is resistant to chemical and mechanical degradation.

Solids	Solvent	Color
<10% Proprietary Ingredient	Fluorosolvent	Clear liquid

Physical Properties of Formulation (all values @ 25°C)	
Viscosity*	< 2 cP
Boiling Point of Solvent	129°C
Flash Point	Not applicable
Environmental	Non toxic, non-ozone depleting
Shelf Life	2 Years (Unopened container)
Specific Gravity	1.5 – 1.7 g/ml

*Determined by Zahn Cup #1 testing

Physical Properties of Post Treatment Coating	
Coating Thickness (varies with application)	2 - 20 nm
Visible Light Transmission	>90%
Water Contact Angle	115°
Oil Contact Angle	60°

Features

- Repels water, oil, and other organic materials
- Excellent chemical bonding to glass and hard coated optical plastics
- Does not change the appearance of the surface
- Easy to apply

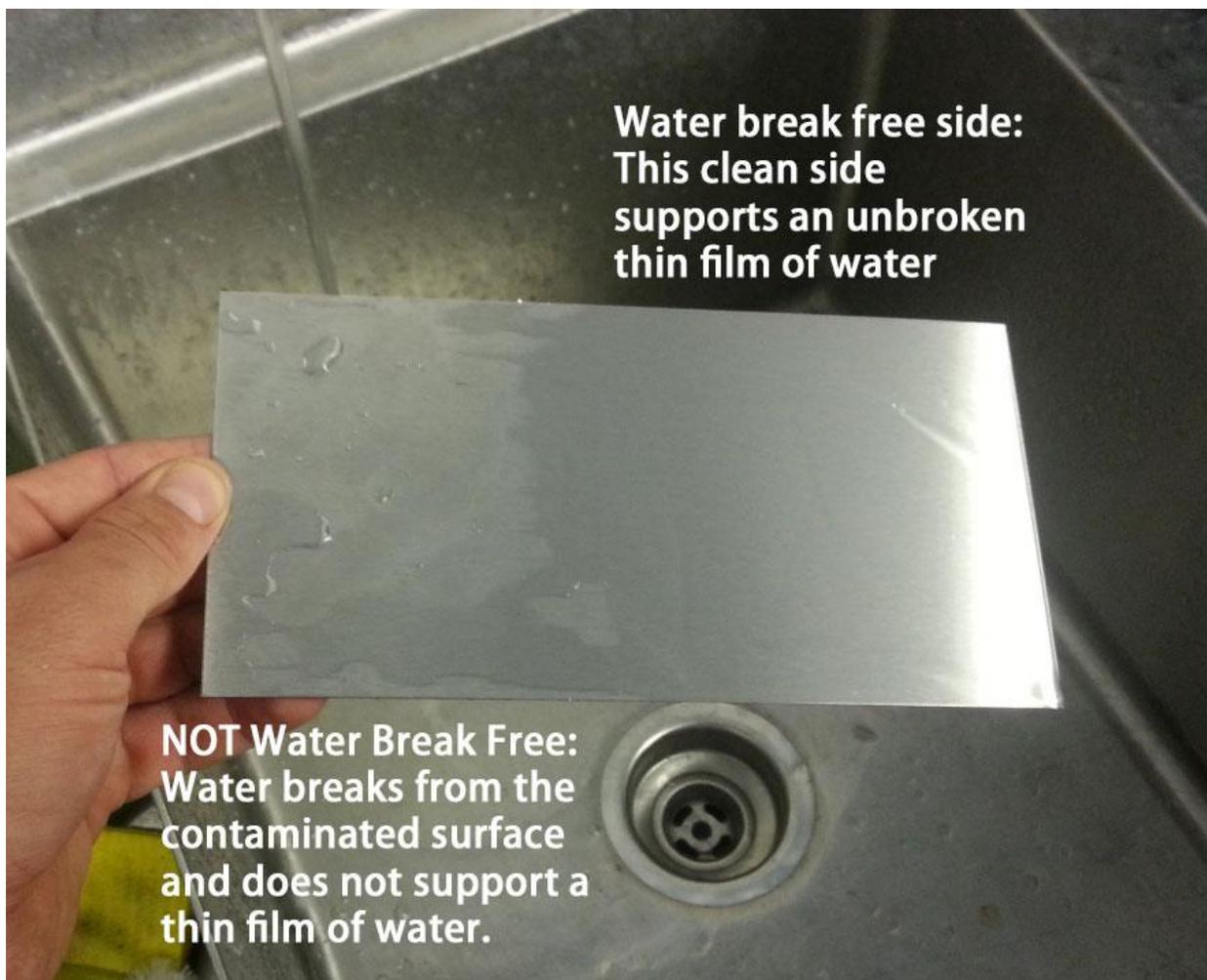
Application Ideas

- Easily create a smudge and water resistant surface treatment on glass screens, and hard coated optical plastics

Application Techniques

Surface Preparation/ Cleaning:

Ensure that the surface is free of any grease, fingerprints, adhesive residues or dirt (*i.e.*, water break free, see picture below). This can be accomplished by first degreasing the surface with solvents or by rinsing with soap and water. Then remove monolayer-scale contaminants. This is typically performed by using a cleaner specifically designed for the substrate you are working with. Contact Aculon if you are unsure what cleaner to use and we will recommend one best suited for your application. The substrate should be water break-free before continuing to coating steps. Substrates should be coated as soon as possible after cleaning to minimize the potential for recontamination.



Treatment Application:

Wipe: Utilize pre-moistened towelette or dispense 1.5 ml Aculon Glass Repellency Treatment onto a fresh piece of folded polyester or cotton cloth and vigorously wipe every surface for 1 minute by rubbing in a circular motion, then wipe excess treatment from the surface using a microfiber cloth.

Flow: Dispense product over the surface. Apply enough material to coat the surface. Allow excess material to drain. Cure for durability.

Spray: Spray the solution on the substrate, air dry. If the coating is too thick, reduce the amount applied by changing the settings on the spray gun or request a sample of diluent from Aculon. Spray Equipment Suggestions; HVLP (Binks Mach 1), HVLP (Devilbiss JGHV), Air Atomization (Devilbiss MBC gun) and Airless (Graco Model 225-292 President Pump Series A).

Dip: Immerse the substrate in the treatment for one minute, remove at a speed to give desired thickness. If excess treatment remains on the surface it can be rinsed away with Aculon fluorosolvent (contact an Aculon representative for samples).

Drying/ Curing: Cure at room temperature with 40-50% relative humidity for ≥ 24 hours. The product may also be cured for 2 hours at 150°C. Higher temperature cures create coatings with increased durability. Choose cure temperatures and conditions based on your substrate and durability requirements.

Testing For Hydrophobicity:

Allow droplets of water to fall onto the surface, they should bead up to a contact angle $>90^\circ$. If the surface is not hydrophobic clean the surface again and reapply.

Safety, Handling, Storage, Shelf Life:

Store in a cool ($\sim 25^\circ\text{C}$) and dry area, and keep away from direct sun light. See this product's MSDS for proper handling. When stored properly, product has a 1 year shelf life.

For Additional Information:

To request additional product information or sales assistance, contact Aculon's Technical Team, at 858-350-9474. For information on other Aculon products, please visit our website at www.aculon.com.

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