



# Aculon® ON-470

## Hydrophilic coating

Aculon® ON-470 is a surface treatment capable of imparting hydrophilicity to various substrates in a simple one-step process. This product is typically applied by wiping, dipping, or flow coating.

Solids	Solvent	Color
<5% Proprietary Ingredient	Trifluoroethanol	Clear liquid

Physical Properties of Formulation (all values @ 25°C)	
Viscosity*	< 2 cP
Boiling Point of Solvent	77 - 88 °C
Flash Point	29 °C
Environmental	Toxic by inhalation and ingestion, flammable
Shelf Life	6 months (Unopened container)
Specific Gravity	0.8

\*Determined by Zahn Cup #1 testing

Physical Properties of Post Treatment Coating	
Coating Thickness (wipe coating)	< 10 microns
Polycarbonate Haze/% Transmittance/Clarity	Not determined
Post application Polycarbonate Haze/% Transmittance/Clarity	Not determined
Water Contact Angle (hydrated)	< 20°

### Features

- Provides a hydrophilic coating
- Easy to apply
- Hydrated coating repels oil
- Excellent chemical bonding to many surfaces
- Does not leach from surfaces after application and drying

### Application Ideas

- Easily create a hydrophilic surface
- Non-fouling of surfaces to oil
- Microfluidic channels
- Anti-fouling properties to biological materials

### Chemical Compatibility

#### Recommendation for tubing and plastics via application equipment

- Compatible with: Polyethylene terephthalate (PET), Polytetrafluoroethylene (PTFE), Viton, polycarbonate, acrylics
- Incompatible with some hard coats. Test with your substrate for determine compatibility.

### Application Techniques

## Surface Preparation/ Cleaning:

Ensure that the surface is free of any grease, fingerprints, adhesive residues or dirt. This can be accomplished by first degreasing the surface with solvents or by rinsing with IPA.

Contact Aculon if you are unsure what cleaner to use and we will recommend one best suited for your application.

Substrates should be coated after cleaning as soon as possible to minimize the potential for recontamination.

## Treatment Application:

**Dispense:** Dispense product over the surface. Apply enough material to coat the surface. Allow excess material to drain. Buff to clear coating if desired with a clean room wipe.

**Dip:** Immerse the substrate in the solution for 20 seconds, air dry till solvent evaporated. Recommended dip containers are stainless steel, glass or aluminum. Buff to clear coating if desired with a clean room wipe.

**Wipe:** Moisten a clean room wipe in the solution and wipe apply to the substrate. Buff to clear coating if desired.

**Drying:** Allow the film to set at room temperature until the solvent has evaporated. Cure the part for 10 min at 60°C.

## Testing Hydrophilicity:

Allow the parts to coated parts to rest and hydrate for 2 hours prior to testing. Allow droplets of water to fall onto the surface, the water will wet out the substrate within seconds. If the surface is not hydrophilic clean the surface again and reapply.

## Safety, Handling, Storage, Shelf Life:

Solvent is toxic so gloves and ventilation are necessary. Store in a cool (~25°C) and dry area, and keep away from direct sun light. See this product's SDS for proper handling. When stored properly, product has a 6-month 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](http://www.aculon.com).

---

**Product Use:** All statements, technical information and recommendations contained in this document are based on tests or experience that Aculon believes to be dependable. However, many factors beyond Aculon's control can affect the use and effectiveness of an Aculon product in a particular use or application, including conditions under which the product is used and the time and conditions in which the product is expected to perform. Since these factors are exclusively within the user's knowledge and control, it is essential that the user evaluate the Aculon product to determine whether it is fit for a specific purpose and suitable for the user's method of application.

**Warranty and Liability:** Aculon makes no warranty or representation, expressed or implied, by operation of law or otherwise, as to the merchantability or fitness for a particular purpose of the goods arising out of a course of dealing, custom or usage of trade. Aculon shall not be liable for any defect in the goods sold hereunder and customer releases Aculon from any and all liability for negligence. Aculon will not be liable for consequential, incidental or any damages other than repair or replacement of defective good or refund of the purchase price paid for such defective goods.

**The information provided is CONFIDENTIAL and is only for evaluation purposes.**

**Aculon • 10110 Sorrento Valley Road • San Diego • California • 92121  
• Tel: 858-350-9474 • Email: [info@aculon.com](mailto:info@aculon.com)**