



# Aculon® NanoProof® 8.4 Hydrophobic Treatment

## Product Information

**Aculon® NanoProof® 8.4** is a surface treatment capable of imparting hydrophobicity to a wide variety of surfaces in a simple, one-step process. It is designed for multi-surface treatment on metals, semiconductors, and polymers. This product is typically applied by dip, or flow treatment and results in a hydrophobic film. It is specifically designed to protect electronic circuitry from immersion in water.

| Solids                      | Solvent          | Color |
|-----------------------------|------------------|-------|
| <11% Proprietary Ingredient | Methycyclohexane | Hazy  |

| Physical Properties of Formulation<br>(all values @ 25°C) |                              |
|---|------------------------------|
| Viscosity*  | 4000 – 10000 cps             |
| Boiling Point of Solvent                                  | 110°C                        |
| Flash Point of Solvent                                    | 4.0°C                        |
| Environmental   | non-ozone depleting          |
| Shelf Life  | 2 Years (Unopened container) |
| Specific Gravity  | 0.7 - 0.8                    |

\*Determined by Zahn Cup #1 testing

| Physical Properties of Post Treatment Treatment |                       |
|---|-----------------------|
| Treatment Thickness                             | Application dependent |
| Water Contact Angle                             | > 110°                |

### Features

- Creates moisture barriers on coated parts
- Repels water
- Adheres to a variety of surfaces ensuring protection of PCBs.
- Push-through conductivity within 24 hours
- Easy to apply
- RoHS compliant
- Contains no REACH SVHC compounds

### Application Ideas

- Coat PCB's for water proofing
- Impart repellency to consumer electronics

### Chemical Compatibility

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

- Compatible with: Acetal, PEEK, Polyethylene terephthalate (PET), Polyphenylene sulfide (PPS), Polytetrafluoroethylene (PTFE)
- Avoid: ABS, HDPE, LDPE, CPVC, PVC, PP, PVDF, silicone, neoprene, EPDM, Polypropylene, and natural rubber

### 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. Depending on the sensitivity of your part to liquids Kyzen cleaners like Ionox I3416 or Cybersolv 141-R may be most appropriate for removing surface contamination. 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:

**Flow Coat:** Dispense product over the surface. Apply enough material to coat the surface. Allow excess material to drain.

**Dip:** Immerse the substrate in the solution for 20 seconds, air dry until the solvent evaporates. Recommended dip containers are stainless steel, glass or aluminum. Plastic containers are likely to contaminate the treatment solution reducing performance.

**Drying:** Air dry at room temperature until the solvent evaporates. In some cases additional thermal curing (e.g. 100°C for 5 minutes) will speed solvent evaporation. Treatment will be deformable by touch during solvent evaporation, thus care should be taken when handling the part so as to not disturb the treatment in sensitive areas.

**Masking:** Expect no mask to be compatible

### Testing For Hydrophobicity:

Allow droplets of water to fall onto the surface, they should bead up to a contact angle >100°. If the surface is not hydrophobic clean the surface again and reapply.

### Safety, Handling, Storage, Shelf Life:

Store in a cool (~25°C) and dry area, and keep away from direct sun light. See this product's MSDS for proper handling. This product does not contain any RoHS or REACH SVCH 168 compounds. When stored properly, product has a 2 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](http://www.aculon.com).

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