



Aculon® NanoProof® 2.0

Hydrophobic coating

Aculon® NanoProof® 2.0 repellency product is a surface treatment capable of imparting hydrophobicity to printed circuit boards and electronic components in a simple, one-step process. Aculon® NanoProof® 2.0 is typically applied by dipping or, flow coating and result in hydrophobic films.

Solids	Solvent	Color
<10% Proprietary Ingredient	Hydrocarbon Solvent	Clear liquid

Physical Properties of Formulation (all values @ 25°C)	
Viscosity*	> 20 cP
Boiling Point of Solvent	148.8 – 176.7 °C
Flash Point	39 °C
Environmental	Nontoxic, non-ozone depleting, flammable
Shelf Life	2 Years (Unopened container)
Specific Gravity	0.78

*Determined by Zahn Cup #1 testing

Physical Properties of Post Treatment Coating	
Coating Thickness (spray coating)	to be determined
Visible Light Transmission	to be determined
Water Contact Angle	> 100°
Oil Contact Angle	< 50°

Features

- Provides a hydrophobic film
- Easy to apply
- Adhesion to a broad range of substrates
- Coating is non-conductive
- Contains a UV tracer
- No cure required
- RoHS compliant
- Contains no REACH SVHC compounds

Application Ideas

- Water proofing of PCB's
- Protecting electronic devices from exposure to common liquid

Chemical Compatibility

Recommendation for tubing and plastics via application equipment

- Compatible with stainless steel nozzles and dispensers.
- Compatible with: Polyethylene terephthalate (PET), Polytetrafluoroethylene (PTFE), Viton
- Confirmed incompatible with: HDPE, LDPE, Polyurethane, PVC, Tygon, Noryl, ABS, PP, Polyphenol ethylene ether, silicone, neoprene, EPM, 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:

Dispense: 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 till solvent evaporated. Recommended dip containers are stainless steel, glass or aluminum. Plastic containers are likely to contaminate the coating solution reducing performance.

Drying: Allow the film to set at room temperature until the solvent has evaporated. Depending on the amount applied, the parts should be tack free in 30 min and fully cured in 60 min.

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 $>90^\circ$. 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. 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.

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Aculon • 11839 Sorrento Valley Road, Suite 901 • San Diego • California • 92121
• Tel: 858-350-9474 • Email: info@aculon.com