



Aculon® NanoClear Part B Treatment

Product Information

Aculon® NanoClear Part B Treatment is a surface treatment capable of imparting a repellent surface on nickel, stainless steel, electropolished, and other metal stencils. It is designed to be used in conjunction with NanoClear Part A Cleaner which is utilized prior to the Part B Treatment. Aculon NanoClear Part B Treatment is applied via a pre-saturated wipe, and results in a hydro/oleophobic monolayer film which results in drastically improved stencil print performance.

Solids	Solvent	Color
<5% Proprietary Ingredient	Ethanol, Fluorosolvent	Clear/ Colorless

Physical Properties of Formulation (all values @ 25°C)	
Viscosity*	2 cP
Boiling Point of Solvent	78°C
Flash Point	54°C
Environmental	Non toxic, non-ozone depleting, flammable
Shelf Life	2+ Years
Specific Gravity	0.98g/ml

*Determined by Zahn Cup #1 testing

Physical Properties of Post Treatment Coating	
Visible Light Transmission	100%
Coating Thickness	2-4nm
Hydrophobicity (Water Contact Angle on Flat Substrate)	116°
Oleophobicity (Oil Contact Angle on Flat Substrate)	80°
Coating degradation temperature	225°C

Features

- Repels water, oil, and other liquid organic materials
- Excellent chemical bonding to metal stencil surfaces
- Lowers the coefficient of friction of surfaces
- No stress build-up on the substrates
- Does not change the appearance of the surface
- Easy to apply and safe to use (take flammable liquid precautions)
- Does not leach from surfaces after application and drying
- Does not polymerize upon drying, so over-application is not a problem

Application Techniques

Surface Preparation/ Cleaning:

Utilize Aculon NanoClear Part A: Refer to NanoClear Part A TDS for instructions

Part B Treatment Application:

Wipe: Only open NanoClear Part B wipe when ready to use IMMEDIATELY. Carrier solvent rapidly dries once open and wipe must be used within seconds of opening. Follow these procedures:

1. Remove the moistened NanoClear Part B towelette from the dual pack. Use immediately on opening!
2. Wipe the stencils aperture area on the bottom side (board side) of the stencil. It is not necessary to treat the top side.
 - a. Ensure that all areas are wiped with moderate force for 1 – 3 minutes.
 - b. Sufficient contact time and force is critical for successful treatment.

Two Options For Testing For Hydrophobicity:

- Utilize NanoClear Test (Dyne) Pen
- Allow droplets of water to fall onto the surface, they should bead up and bounce or roll down easily without leaving any tracks of water behind while tilting the substrate. If the surface is not hydrophobic utilize another NanoClear dual pack to clean and treat the surface again.

NanoClear Treated Stencil Usage Best Practices

Cleaners:

- **NEVER** utilize aqueous high pH (pH>9) caustic/basic stencil cleaners in your process
- DO utilize neutral pH aqueous or organic cleaners

Understencil Wiping

- **NEVER** utilize rough & abrasive understencil wipes
- DO utilize soft & non abrasive pocketed understencil wipes
- DO reduce understencil cleaning frequency where possible

Reapplication:

Should the efficacy of the Nanoclear treatment be reduced or damaged reapplication of NanoClear can be accomplished by following the NanoClear Part A & Part B instructions again. No stripping or removal of previous coating is required. Your stencil can be re-coated indefinitely assuming the stencil is mechanically sound.

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 and fire hazard data. 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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