Novec™ Replacement Technology Comparison

nanoproof®

Aculon® NanoProof® electronic coating series offers anti-wetting, anti-stiction, chemical protection, and moisture protection. The NanoProof® 3 series has similar performance and chemical properties as 3M™ Novec™ products (see Figure A), providing a readily available and accessible alternative to the 3M™ Novec™ product series. This product series is available in North America, Europe, and Asia.

3M™ Novec™ Products	Aculon® Replacement
	NanoProof® 3-01
Novec™ 1700	NanoProof® 3-02
Novec™ 1702	NanoProof® 3-002
Novec™ 1710	NanoProof® 3-10
Novec™ 1720	NanoProof® 3-001X
Novec™ 1902	NanoProof® 3-02
Novec™ 1904	NanoProof® 3-04
Novec™ 1908	NanoProof® 3-08
Novec™ 2704	NanoProof® 3-04
Novec™ 2708	NanoProof® 3-08
Novec™ 7100	NanoProof® 3 Extender

Figure A

	3M™ Novec™ Product	Aculon® NanoProof® Product
	1720	3-001X
Solids	Fluorosilane 0.1%	Fluoroacrylate 0.1%
Solvent	7100DL	NanoProof® 3 Series Extender
Appearance	Clear	Clear
Density	1.5 g/mL	1.5 g/mL
Viscosity	<20 cP	<20 cP
Boiling Point	61°C	56°C
Flash Point	None	None
Environmental	Non-ozone depleting, low in toxicity, low in GWP, RoHS compliant and VOC exempt (per U.S. EPA), contains no chlorine or bromine	Non-ozone depleting, low in toxicity, low in GWP, RoHS compliant and VOC exempt (per U.S. EPA), contains no chlorine or bromine
Shelf Life	2 years (unopened container)	2 years (unopened container)
Thickness (varies by application style)	<1 µm	<1 µm
Solvent and Chemical Resistance	Resists a variety of solvents and chemicals. Attacked by fluorosolvents and ketones.	Resists a Variety of Solvents and Chemicals. Attacked by fluorosolvents and ketones.
Tg (glass transition)	-110°C	~95°C from peak on DSC (Viscous Pool by 70°C)
Thermal Stability of Dry Film	Stable at 200°C in air for greater than 3 hrs	Can withstand 175°C for 24hrs and maintain repellency (WCA/OCA: 120°/78°)
Contact Angles	WCA / OCA: 105° / 65°	WCA / OCA: 120° / 80°
Solder Through Repairability	Yes	Yes
Reworkable	Not when cured	Yes, with solvent
Cure	135°C for 15 minutes	None

Contact an Aculon® representative to learn which NanoProof® 3 product best suits your project needs!