



3M Novec Coating Solutions

The difference
is clear...

3M Novec Surface Modifiers provide fast and effective coating protection for electronics manufacturing and assembly solutions

- Offers start to finish PCB coating in less than 40 minutes
- Rapid application - no masking of contacts required
- Excellent protection and particle repellency
- Re-workable solution enables quick repairs
- Excellent health & safety profile - non flammable solutions
- Excellent environmental properties

The coating effect:

Why 3M™ Novec™ Surface Modifiers?

3M have developed a range of coating products to add to the 3M Novec family of chemical solutions. Novec Surface Modifiers provide a high performing alternative to conformal coatings. The product range has been designed to deliver;

- Excellent protection and repellency properties;
- Improved manufacturing efficiencies in the coating process;
- Health & Safety and environmental benefits.

Features of Novec Surface Modifiers

- **One micron thick** - provides protection by creating a thin layer of protection which when applied to an electronic assembly dries to a clear, uniform film.
- **Excellent repellency** - coats all surfaces of a component reducing the surface energy to just 14-15 mN/m enabling exceptional repellency of moisture & particles.
- **Environmental profile** - Low environmental impact compared to alternative coating solutions.
- **No masking required** - the thin layer of surface modifier can be applied to all contacts on a PCB without affecting functionality.
- **Health & safety profile** - 3M Novec Solutions are non flammable and low in toxicity enabling high level of worker exposure & minimum equipment requirements.
- **Speed of application** - Novec Surface Modifiers deliver on manufacturing efficiencies. Due to no requirement for masking contacts and the thin layer of coating applied, a PCB can be coated and dried in under 7 minutes.
- **Re-workable** - the one micron thick coating can be soldered through for fast & effective repairs to a PCB.



PCB protection:
3M Novec Surface Modifier coated on a PCB protects the component from corrosion which can result in malfunctions and costly repairs.

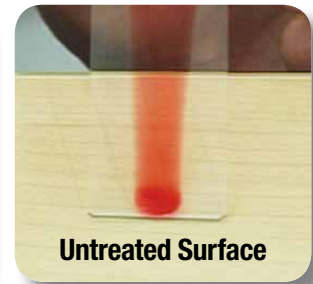


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Treated Surface



Untreated Surface

Coloured water tested on untreated and 3M Novec treated glass slide. Demonstrating the repellency properties of the substrate when treated with a 3M Novec Surface Modifier.

Physical (Liquid) Properties		
	3M™ Novec™ EGC-2702	3M™ Novec™ EGC-1700
% Solids	2%	2%
Viscosity	0.61 mPa.S	0.61 mPa.S
Flash Point	None	None
Physical (Coating) Properties		
Coating Thickness	<1micron	<1Micron
Coverage	19m2/Ltr	40m2/Ltr
Surface Energy	14-15 mN/m	15-16 mN/m
Temperature Range	-50 to 200°C	-65 to 175°C
Health & Safety Profile	Excellent	Excellent
Manufacturing		
Drying Time	<5min	<5min
Curing time	30min @ 80°C	Not Required
Masking/De-masking required	No	No
Preferred Application method	Dip	Dip
Optically Clear	Yes	Yes
Strippable	No	Yes with Novec HFE-7100
Solder-through Repairability	Yes	Yes
Repellency Properties		
Water	Excellent	Excellent
Oil	Excellent	Excellent
Solvents	Excellent	Excellent
Approvals		
Thermal Cycling (IEC 68-2-14)	Pass	Pass
Humidity (BS3900 F9 / ISO 6270-1:2001)	Pass	Pass
Fungal growth (IPC-TM-650 2.6.1.1)	Pass	Pass
Surface Insulation Resistance (SIR) (IPC TM-650 2.6.3.4 & IPC-B25A test boards, pattern D)	Pass	Pass
UL 746 E Registration	Qualified	Qualified
UL 94 V(0)	Pass	Pass

If you require further information visit our website
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Please quote 'Novec Coating Literature'

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