

3M™ Novec™ 1720 Electronic Grade Coating

Introduction

3M™ Novec™ 1720 Electronic Grade Coating is a clear, low viscosity, low surface tension solution of a fluorosilane polymer carried in 3M™ Novec™ 7100 Engineered Fluid. The coating is designed for easy clean and anti-smudge capabilities on a variety of surfaces such as glass flat panel displays and mobile electronic device components. The coating dries to a thin, transparent, permanent film with excellent hydrophobic and oleophobic properties. Post-curing provides added durability and abrasion resistance. It is non-flammable, low in toxicity, non-ozone depleting and RoHS compliant.

Construction

Solids	Solvent	Color	Container Size
0.1 wt% fluoropolymer	3M™ Novec™ 7100DL Engineered Fluid	Clear	3.5 gal (40lb/18.1 kg), 1 gal (12lb/5.4 kg)

Typical Physical Properties

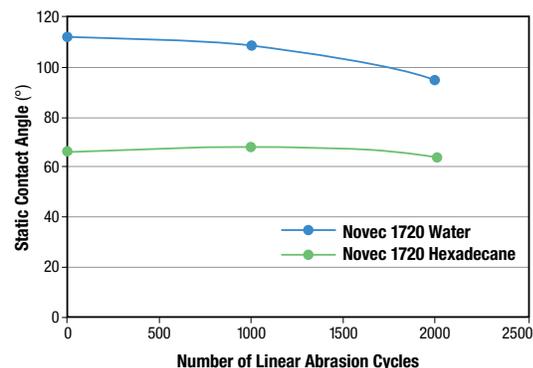
Property	Coating Solution
Appearance	Clear, colorless liquid solution
Solids	0.1 wt% fluoropolymer
Solvent	3M™ Novec™ 7100DL Engineered Fluid
Specific Gravity	1.5
Boiling Point of Solvent	61°C (142°F)
Flash Point	None
Environmental System	Low in toxicity, non-ozone depleting, non-flammable, VOC exempt (US EPA), RoHS compliant, contains no chlorine or bromine One Part

Not for specification purposes. All values @ 25°C unless otherwise specified.

Property	Fluoropolymer Coating
Appearance	Transparent, colorless
Coating Thickness	<10 nm
Solvent and Chemical Resistance	Yes
T _g (glass transition temperature)	-110°C
Thermal Stability of Dry Film	Stable at 200°C in air for greater than 3 hours
Contact Angles (static, dip coated/dried on glass substrate)	105° (water)
Shelf Life	2 years from date of manufacture in unopened container
Solder-Through Repairability	Yes

Features

- Air dries in seconds and is to be thermally cured for abrasion resistance
- Adheres to a variety of surfaces including glass, metals and metal oxides.
- Provides excellent anti-wetting, anti-stiction and anti-migration properties.
- Contains no volatile organic compounds (VOCs) and has low global warming potential
- Is optically transparent and contributes no additional haze and no loss of clarity



Application Ideas

- Provides easy clean, smudge-resistant protection for touch screens, liquid crystal and flat panel displays, mobile electronic handhelds, electronic tablets and other electronic components and devices
- Can serve as
 - an anti-stiction coating for liquid crystal displays, micromotors or MEMS (Micro Electronic Mechanical Systems) components
 - an anti-migration coating for displays, spindle motors or lubricated electronic parts or
 - an anti-corrosion coating for a variety of materials and components

Application Techniques

Can be dipped, sprayed or selectively deposited. Water should be kept out of coating bath as contact will decrease the pot life. Surfaces to be coated should be clean and dried before application. The solvent will evaporate quickly and the fluoropolymer film will dry in minutes. The coating should be thermally cured in an oven for best results.

Application Options	Dipping (preferred), spray or syringe dispense
Drying/Curing	Dries at room temperature; can be handled in under two minutes; thermally cure at 135°C for 10-15 minutes
Removability	Permanent once cured

Safety, Handling, Storage, Shelf Life

To avoid thermal decomposition, neither the coating solution nor the dried fluoropolymer film should be subjected to temperatures above 250°C (482°F). When stored under conditions of 16-27°C (60-80°F) and less than 60% R.H. in the original, unopened container, the shelf life is certified for two years. Before using this product, please read the current product Material Safety Data Sheet (available through your 3M sales or technical service representative or at www.3M.com/Novec) and the precautionary statement on the product package. Follow all applicable precautions and directions.

For Additional Information

To request additional product information or sales assistance, contact 3M Customer Service at one of the numbers below or visit www.3M.com/Novec. For other 3M global offices or information on other 3M products for electronics, visit our web site at 3M.com/electronics.

The 3M™ Novec™ Brand Family

The Novec brand is the hallmark for a variety of proprietary 3M products. Although each has its own unique formula and performance properties, all Novec products are designed in common to address the need for safe, effective, sustainable solutions in industry-specific applications. These include precision and electronics cleaning, heat transfer, fire protection, lubricant deposition and several specialty chemical applications.

3M™ Novec™ Engineered Fluids • 3M™ Novec™ Aerosol Cleaners • 3M™ Novec™ 1230 Fire Protection Fluid • 3M™ Novec™ Electronic Grade Coatings • 3M™ Novec™ Electronic Surfactants

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