

Carrier and lubricant deposition solvent applications using 3M™ Fluorinert™ Electronic Liquids

When creating new coatings, lubricants and other formulations, it is crucial to have the appropriate solvency, surface tension, dielectric strength, and boiling point, as well as non-flammability. These factors can significantly impact your product quality, as well as how the product performs for your customer. That's why we developed 3M™ Fluorinert™ Electronic Liquids, offering a wide variety of solutions for you to choose from.

Property	Unit	3M™ Fluorinert™ Electronic Liquids						
		FC-3284	FC-72	FC-770	FC-3283	FC-40	FC-43	FC-70
Boiling Point	°C (F)	50 (122)	56 (132)	95 (203)	128 (262)	165 (329)	174 (345)	215 (419)
Dielectric Breakdown Strength (over 0.1 in gap)	kV	>40 kV	>40 kV	>40 kV	>40 kV	>40 kV	>40 kV	>40 kV
Flash Point*	°C (°F)	None	None	None	None	None	None	None
Vapor Pressure	kPa	35	31	6.6	1.4	0.29	0.19	0.02
Heat of Vaporization	kJ/kg	105	88	86	78	68	70	69
Liquid Density	g/cm ³	1.71	1.68	1.79	1.82	1.85	1.86	1.94
Kinematic Viscosity	cSt	0.42	0.38	0.79	0.75	2.2	2.5	12
Specific Heat	J kg ⁻¹ K ⁻¹	1100	1100	1038	1100	1100	1100	1100
Surface Tension	mN/m	13	10	15	15	16	16	18
Solubility of Water in Fluid	ppm by weight	14	10	14	7	<7	7	8
Solubility of Fluid in Water	ppm by weight	<5	<5	<5	<5	<5	<5	<5
Solubility	Fluorocarbon	Very High	Very High	Very High	Very High	Very High	Very High	Very High
	Hydrocarbon	Low	Low	Low	Low	Low	Low	Low
Plastic Elastomer Compatibility	–	3M™ Fluorinert™ Electronic Liquids are compatible with most plastics and elastomers. Contact 3M for more information.						

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

* Per closed cup flash point, tested in accordance with ASTM D3278 test method.

3M EMSD Medical Device Policy

These 3M products are intended for use as process solvents in applications, such as formulating coatings and lubricants. They are not intended, nor approved, for incorporation into medical devices or for use in pharmaceuticals. 3M will not support applications such as lung perfusion or blood substitutes that involve temporary or permanent implantation of these 3M products. [Read a complete statement](#) of 3M Electronics Materials Solutions Division's Global Policy regarding the sale and use of products for medical and pharmaceutical applications.

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