

# THERMASOLV™

## Dielectric Cooling Fluids for electronic & electric devices

### APPLICATION FIELD

Electronic or electrical devices in use, create heat and **need to be cooled to avoid malfunction**. Based on our 60 years of experience in solvent based cleaning fluids and processes, Inventec has developed a cooling fluid range to cater today's and future technical requirements.

Key parameters taken into account:

- Heat transfer effectiveness
- Electrical Insulating Properties
- Safety & environmental consideration
- Compatibility with materials

### 3 MAIN PROCESSES

- 1 Immersion cooling (1-phase / 2-phase)
- 2 Direct plate & tube cooling
- 3 Dielectric testing & manufacturing

## KEY FEATURES



### Performance

- Outstanding thermodynamic properties
- Dielectric fluid
- Low viscosity
- Low surface tension
- High thermal stability



### Sustainable

- Recyclable
- Non-corrosive
- Compatible with most materials
- Mild odor
- Medium low to No GWP
- No ODP



### Safe

- Non-flammable & no flash point
- No CMR or hazardous compounds
- Fire extinguishing properties (depending on product)

## GET IN TOUCH

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# Dielectric cooling fluids

## OVERVIEW TABLE



APPLICATIONS	THERMASOLV IM1	THERMASOLV IM2	THERMASOLV IM6	THERMASOLV IM7	THERMASOLV CF2	THERMASOLV CF3
ODP	0	0	0	0	0	0
GWP	320	<10	20	55	<120	<108
Flash Point	No	No	No	No	No	No
Boiling Point (°C/°F)	61 / 142	49 / 120	47 / 117	76 / 169	110 / 230	120 / 248
Pour Point (°C/°F)	-135 / -211	-108 / -162	-117 / -179	-138 / -216	-110 / -166	-82 / - 116
Critical Temperature (°C/°F)	195 / 387	169 / 336	170 / 337	210 / 410	285 / 545	285 / 545
Critical Pressure (Mpa)	2,23	1,88	2,21	2,01	5	n.a.
Vapor Pressure (kPa)	27	33	35	16	1,9	1,5
Heat of vaporization (KJ/Kg @BP)	112	88	93	119	88	82,8
Liquid density (Kg/m <sup>3</sup> )	1520	1600	1600	1430	1815	1836
Kinematic viscosity (cSt)	0,38	0,4	0,36	0,43	1,35	1,27
Specific Heat (J/Kg-K @25°C)	1138	1103	1144	1220	1087	1034
Surface tension (dynes/cm <sup>2</sup> )	13,6	10,8	11,4	13,6	15	13
Dielectric strenght (KV)	28	>40	79	>25	39	>35,7
Dielectric constant @ 1 kHz	7,4	1,84	1,88	7,3	1,79	2,09
Resistivity (Ohm-cm)	1,00E+09	1,00E+13	1,00E+15	1,00E+08	2,50E+14	1,00E+15
Thermal conductivity (W/m-K)	0,069	0,059	0,110	0,069	0,115	0,112
Water content spec (ppm)	50	10	10	100	15	15
Water solubility (ppm)	95	10	<10	92	<10	<10

Non-exhaustive list of products. INVENTEC assists you to select the best product adapted to your need.