THERMAL MANAGEMENT

THERMASOLV™ CF8

DIELECTRIC HEAT TRANSFER FLUID
BOILING POINT: 108°C/226°F
LOW VISCOSITY AT SUBZERO TEMPERATURES

BENEFITS

THERMASOLV CF8 is a dielectric heat transfer fluid, dedicated for a broad range of electric and electronics cooling and testing applications, including immersion and direct liquid cooling, semicon chillers, critical-temperature manufacturing, dielectric testing, batteries and charging stations. The favorable viscosity, density and surface tension allow optimal surface contact, contributing to superior heat transfer performance.

Thermasolv CF8 has a boiling point of 108 °C/226 °F and is specifically designed to offer a wider operating temperature range, with viscosity that stays low at reduced temperatures, extending application down to −40°C.

Its high electrical insulation allows electronics and electrical devices to be immersed in the fluid under power. Combined with broad compatibility across metals, plastics and elastomers and excellent chemical stability, it is well suited for immersion cooling.

THERMASOLV CF8 is formulated with safety in mind: It is non-flammable and has no precautionary, human health hazard, or environmental hazard statements. It is also a sustainable solution — no ODP, low GWP, and can be returned for recycling when needed.

PERFORMANCE	▪ Excellent thermal conductivity ▪ Very low surface tension ▪ High electrical insulation ▪ Low viscosity at low temperatures
COST	▪ Can be returned for recycling and re-use
HSE	▪ Low GWP & no ODP ▪ Non-flammable & no flashpoint ▪ Low environmental impact: GREENWAY product

SPECIFICATIONS

SPECIFICATIONS	VALUES	METHODS
Aspect	Colorless, clear	Visual
Purity (%)	>99,5	Internal

CHARACTERISTICS

CHARACTERISTICS	VALUES
Flash point	No
Boiling point (°C/°F)	108 / 226
Pour point (°C/°F)	-115 / -175
Critical temperature (°C/°F)	285 / 545
Critical pressure (MPa)	4,33
Vapor pressure (kPa @20°C)	2.4
Heat of vaporization (kJ/kg @BP)	under evaluation
Liquid density (Kg/m^3 @20°C)	1753
Kinematic viscosity (cSt @20°C)	0,88
Specific heat (J/kg-K @20°C)	1038
Surface tension (dynes/cm^2)	13
Dielectric strength (kV)	>47
Dielectric constant @1kHz	2,2
Resistivity (Ohm-cm)	>1.2E+15
Thermal conductivity (W/m-K @20°C)	0,062
Water content spec (ppm)	<15
Solubility water in fluid (ppm weight)	<10

PROCESS RECOMMENDATION

The best process will depend on factors such as operating conditions & equipment. Our team is ready to advise you.

Although this product has very good compatibility properties, we cannot foresee all materials that could be exposed to the fluid. We strongly recommend testing before use.

PROCESSES

The product can be used in the following processes:

- Semicon chillers
- 1-phase immersion cooling
- 1-phase direct liquid cooling, where the fluid flows through cold plates or tubes
- Specific manufacturing processes needing stable and uniform cooling
- Dielectric testing
- Tacky agent for preform-based die-attach soldering

TEMPERATURE LIMITS

- Recommended minimum temperature: -40°C/-40°F
- Recommended maximal temperature: 100°C/230°F

PACKAGING, STORAGE & SHELF LIFE

- Store products in their original, sealed packaging in a dry place, preferably at temperatures below 40°C/104°F to prevent packaging distortion and leaks. Keep packaging away from direct sunlight.
- Shelf life is minimum 5 years from production date when kept in recommended conditions. The shelf life provides a guarantee of delivering new product and proper storage (no packaging leakages, no accidental contamination). Once the product is used in a process it is designed for, there is no degradation in quality or performance over time.

AVAILABLE PACKAGING



8KG JERRYCAN



15KG JERRYCAN

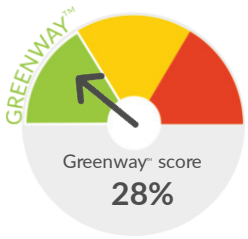


250KG DRUM

Please verify the packaging details, including volume and availability, with your sales representative, as they may vary depending on the production facility where the product is manufactured.

HEALTH, SAFETY & ENVIRONMENT

THERMASOLV CF8 is a GREENWAY product. More info on our Greenway concept via this link.



MAIN CONTRIBUTORS WHICH REDUCE IMPACT:

HUMAN HEALTH & SAFETY

- Non-flammable, no flashpoint & no EUH risk phrases: 100% safe for storage and when used in equipment
- Non-toxic, no corrosive impact & no S risk phrases

ENVIRONMENT PROTECTION & RESOURCES SAVINGS

- No environmental hazard: no H labelling regarding environment
- Can be returned for recycling and re-use: ECOPROGRAM
- Low viscosity: reduced energy use for pumps

PROPERTIES	CF8
Ozone Depleting Potential (ODP)	no
Global Warming Potential (GWP)	<500
VOC	yes
Flashpoint	no

Contains no Reach Substances (on Candidate list, Annex XIV & XVII) / Contains no persistent organic pollutant (EC 850/2004) / Contains no Import/Export Hazardous substances (EU 649/ 2012)

INVENTEC PERFORMANCE CHEMICALS
INSPIRING INNOVATION

In accordance with the Annex II of Directive 2011/65/UE (RoHS), including its amendments, we certify that this product does not contain quantities above 0.1% of Hg, Pb, Cr VI, PBB, PBDE, DEHP, BBP, DBP, DIBP and above 0.01% of Cd.

Used polluted products can be returned to us for recycling if regulations permit. Please contact your local sales contact for more details on our ECOPROGRAM.

Please refer always to the Safety Data Sheet (SDS or MSDS) prior to use. Our SDS can be downloaded at www.quickfds.com. We will request to provide your email address, so we can automatically send you a new version of the SDS when a future update occurs.

TECHNICAL SUPPORT

Inventec has a worldwide dedicated Technical Support team to help you along with the different stages of our cooperation. Depending on your request, we provide online or onsite support to:

- select the right product based on your specific needs
- assist you in your product qualification process
- guide you through the initial setup of your process at all worldwide manufacturing facilities
- provide a fast response to technical issues that may occur at any time during mass production

Contact our technical support via contact@inventec.dehon.com or your local sales representative.

ABOUT INVENTEC

Inventec Performance Chemicals is a global B2B provider of Electronic Assembly Materials, Precision Cleaning Fluids, Protective Coatings and Thermal Management Fluids. For over 60 years we have shown leadership in innovation by putting HEALTH IMPACT, SUSTAINABILITY and RELIABILITY at the core of our product development.

With ISO 9001 & 14001 production sites in France, Switzerland, USA, Mexico, Malaysia and China we can guarantee a smooth and cost-effective supply chain across the globe. Trusted across many industries, our solutions excel in automotive, aerospace, semiconductor, energy, and medical applications where reliability matters most.

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SOLDERING
CLEANING
COATING
COOLING

This data is based on information that the manufacturer believes to be reliable and offered in good faith. In no event will INVENTEC PERFORMANCE CHEMICALS be responsible for special, incidental and consequential damages. The user is responsible to the Administrative Authorities (regulations for the protection of the Environment) for the conformity of his installation.

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