JY TECH

CRYONIX DF-110

CAS 6792-31-0
Dielectric heat transfer fluid



Efficient Cooling. Safe Operation. Sustainable Performance.

PRODUCT OVERVIEW

This advanced fluorinated dielectric fluid is designed for high-performance thermal management in demanding industrial and electronic applications. It combines excellent heat transfer capability with outstanding electrical insulation, environmental compatibility and operational safety.

The fluid enables direct contact cooling of energized components while maintaining long-term stability and reliability.

KEY FEATURES

- Non-flammable — no flash point
- Excellent dielectric properties — safe for energized electronics
- Low-viscosity — reduced pump energy consumption
- Low GWP & zero ODP — environmentally improved solution
- High chemical and thermal stability
- Broad material compatibility
- Wide liquid temperature range

APPLICATIONS

- Immersion cooling (1-phase systems)
- Data center & power electronics cooling
- Semiconductor manufacturing
- Heat transfer systems
- Electrical testing & cleaning processes

TECHNICAL SPECIFICATIONS

Appearance / Odor	Clear, colorless, odorless
Chemical Type	Fluorinated heat transfer fluid
Flash Point	None
Boiling Point	110 – 115°C
Pour Point	-110°C
Critical Temperature	285°C
Critical Pressure	5 MPa
Density (25°C)	1.82 kg/l
Molecular Weight	450 g/mol
Kinematic Viscosity (25°C)	1.43 cSt
Dynamic Viscosity	2.61 mPa·s
Surface Tension	15 mN/m
Specific Heat Capacity	1.08 kJ/(kg·K)
Thermal Conductivity	0.115 W/(m·K)
Heat of Vaporization	~82 – 88 kJ/kg
Expansion Coefficient	~0.0014 K^{-1}
Vapour Pressure	1.9 kPa
Water Solubility	insoluble
***n*-octanol-water partition coefficient**	Log Pow: 7

ENVIRONMENT & SAFETY

- ODP: 0
- GWP: < 100-120
- Non-toxic
- Non-flammable
- Recyclable / Reusable
- No ozone depletion

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ELECTRICAL INSULATION

The fluid allows safe immersion of powered electronic components:

- Dielectric strength KV / gap:
  58KV / 2.5mm,
  23KV / 1mm
- Low dielectric constant (~1.8–2.1)
- High resistivity (10^{13}–10^{14} Ω·cm)

THERMAL PERFORMANCE

The fluid provides efficient heat transfer due to:

- Low viscosity enabling high flow rates
- Good surface wetting characteristics
- Stable thermal properties over a wider temperature range

Recommended operating range (typical)

- Approx. -95°C to +100°C

MATERIAL COMPATIBILITY

Compatible with a wide range of materials.
Testing recommended for specific applications!

- Metals: Aluminium, copper, stainless steel, brass, nickel
- Plastics: ABS, PC, PE, PP, PTFE, PMMA, PEEK
- Elastomers: EPDM, NBR, silicone, FKM

SAFETY

- Read Safety Data Sheet (SDS) before use
- For industrial/professional use only
- CRYONIX DF-110 is a chemically inert PFAS material

PACKAGING & STORAGE

- Available packaging: 5kg plastic bottle, 25kg plastic canister

- Store in closed original containers
- Keep in cool, dry environment
- Avoid contamination during handling

ECONOMIC ADVANTAGES & SUSTAINABILITY

- Lower environmental impact vs. traditional PFC fluids
- Reduced energy consumption (low viscosity)
- Long service life & stable performance
- Reduced maintenance and downtime
- Recycability options available

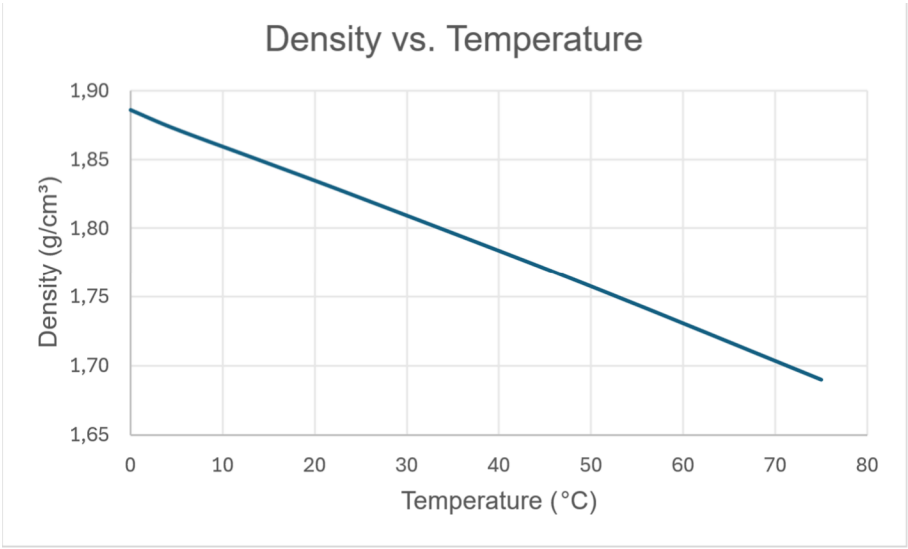
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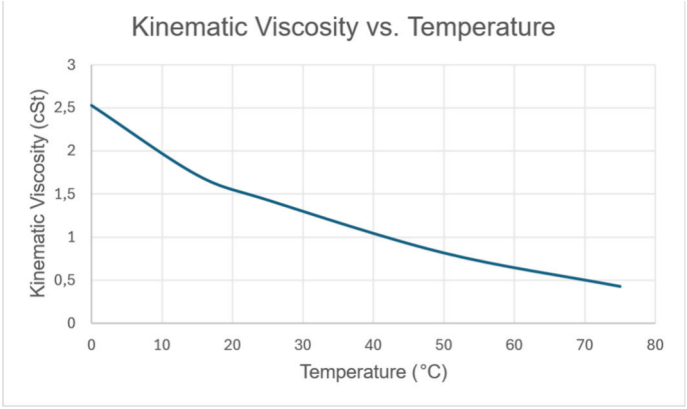
CRYONIX DF-110

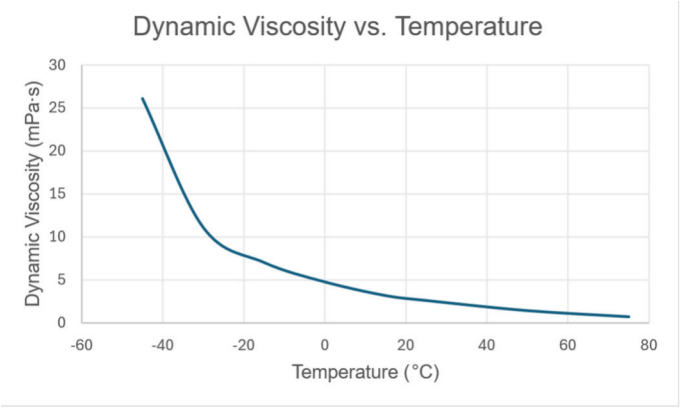
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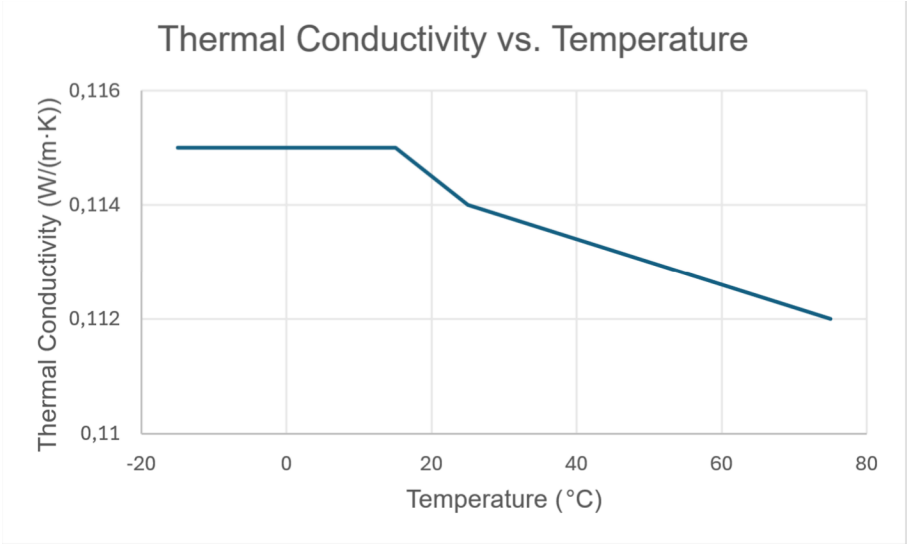
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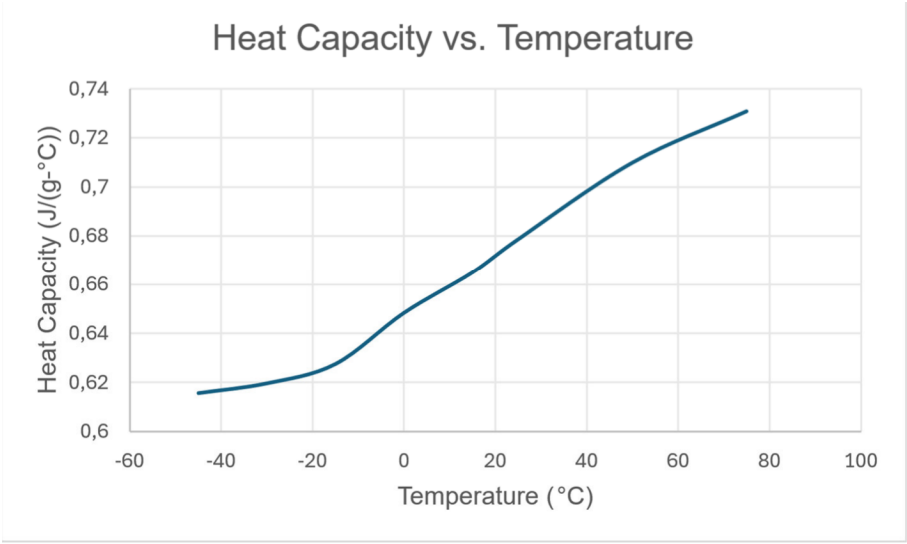
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Disclaimer: Information based on current knowledge. User is responsible for verifying product suitability. No warranty for specific results. Specifications subject to change without notice.