



Efficient Cooling. Safe Operation. Sustainable Performance.

PRODUCT OVERVIEW

AURON HFE-7000 is a fluorinated dielectric heat transfer fluid designed for demanding cooling, testing, and cleaning applications.

The clear, colorless fluid is particularly suitable for electronic testing, immersion cooling, semiconductor manufacturing, and direct evaporation cooling systems. Its exceptionally low pour point, very low viscosity, and excellent dielectric properties enable reliable operation even under extreme temperature conditions.

AURON HFE-7000 combines operational safety, electrical insulation, and thermal performance while maintaining zero ozone depletion potential and low toxicity.

KEY FEATURES

- ▶ Non-flammable — no flash point
- ▶ Excellent dielectric properties
- ▶ Extremely low-viscosity
- ▶ Ultra-low temperature capability
- ▶ High chemical and thermal stability
- ▶ Good material compatibility
- ▶ Direct evaporations capability

APPLICATIONS

- ▶ Immersion cooling (1-phase systems)
- ▶ Semiconductor manufacturing
- ▶ Heat transfer systems
- ▶ Cleaning & solvent applications
- ▶ Direct evaporation cooling / Low-temperature refrigeration systems

TECHNICAL SPECIFICATIONS

Appearance	Clear, colorless
Chemical Type	Fluorinated heat transfer fluid
Flash Point	None
Boiling Point	34°C
Pour Point	-122.5°C
Critical Temperature	165°C
Critical Pressure	2.48 MPa
Density (25°C)	1.40 kg/l
Kinematic Viscosity (25°C)	0.32 cSt
Surface Tension	12.4 mN/m
Specific Heat Capacity	1.30 kJ/(kg·K)
Thermal Conductivity	0.075 W/(m·K)
Heat of Vaporization	142 kJ/kg
Expansion Coefficient	~0.00219 K ⁻¹
Vapour Pressure	64.6 kPa
Water Solubility	< 5 ppm

ENVIRONMENT & SAFETY

- ▶ ODP: 0 / GWP: 530
- ▶ Non-toxic
- ▶ Non-flammable
- ▶ Recyclable / Reusable



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ELECTRICAL INSULATION

The fluid allows safe immersion of powered electronic components:

- ▶ Dielectric strength: >25 kV (0.1" gap)
- ▶ Dielectric constant: 7.4
- ▶ Volume resistivity: $10^8 \Omega \cdot \text{cm}$
- ▶ Specific Resistance: $3.29 \times 10^9 \Omega \cdot \text{mm}$

THERMAL PERFORMANCE

The fluid provides efficient heat transfer due to:

- ▶ Extremely low viscosity enabling high flow rates
- ▶ Excellent surface wetting characteristics
- ▶ Stable thermal properties over a wide temperature range
- ▶ Direct evaporation cooling capability
- ▶ Non-corrosive-behavior

Recommended operating range (typical)

- ▶ Approx. -120°C to $+30^\circ\text{C}$ in liquid phase

MATERIAL COMPATIBILITY

Compatible with a wide range of materials.

Testing recommended for specific applications!

- ▶ Metals: Aluminium, copper, stainless steel, brass, nickel, molybdenum, tungsten
- ▶ Plastics: ABS, PC, PE, PP, PTFE, PMMA, PEEK, PET, Acrylic
- ▶ Elastomers: EPDM, Polyurethane, Fluorosilicone, EPR

SAFETY

- ▶ Read Safety Data Sheet (SDS) before use
- ▶ For industrial/professional use only
- ▶ AURON HFP-700 is a PFAS material
- ▶ High resistance to thermal degradation and hydrolysis
- ▶ Use adequate ventilation during handling

PACKAGING & STORAGE

- ▶ Available packaging: 1kg aluminium bottle / 5kg glass bottle
- ▶ Store in closed original containers
- ▶ Store away from strong acids, bases and oxidizing agents

ECONOMIC ADVANTAGES & SUSTAINABILITY

- ▶ Reduced environmental impact compared to traditional refrigerants and fluorinated solvents
- ▶ Low energy consumption due to extremely low viscosity
- ▶ Long service life and stable performance
- ▶ Reduced maintenance and downtime
- ▶ Improved process reliability
- ▶ Recyclability options available

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