AURON HFE-7200

CAS 163702-06-5
Dielectric heat transfer fluid

Efficient Cooling. Safe Operation. Sustainable Performance.

PRODUCT OVERVIEW

AURON HFE-7200 is a fluorinated ether (ethyl nonafluoroisobutyl ether) designed for heat transfer, precision cleaning, and solvent applications.
It is a clear, colourless, non-flammable fluid with excellent dielectric properties, low viscosity, and strong chemical stability.
It is suitable for direct-contact cooling, electronic testing, and drying processes.

KEY FEATURES

- Non-flammable — no flash point
- Excellent dielectric properties
- Very low-viscosity — high flow efficiency
- Low surface tension — superior wetting
- High chemical and thermal stability
- Fast evaporation / drying capability
- Low environmental impact
- Suitable for cooling, cleaning & solvent use

APPLICATIONS

- Immersion cooling
- Heat transfer systems (semiconductor, electronics)
- Precision cleaning
- Drying processes
- Carrier fluid for lubricants
- Replacement for PFPE, PFCs, HCFCs, HFCs

TECHNICAL SPECIFICATIONS

Appearance	Clear, colourless
Chemical Type	Fluorinated ether
Flash Point	None
Boiling Point	75°C
Pour Point	-150°C
Critical Temperature	210°C
Critical Pressure	2.01 MPa
Density (25°C)	1.43 g/mol
Molecular Weight	264 g/mol
Kinematic Viscosity (25°C)	0.46 cSt
Dynamic Viscosity	0.57 mPa·s
Surface Tension	13.6 mN/m
Specific Heat Capacity	1.22 kJ/(kg·K)
Thermal Conductivity	0.068 W/(m·K)
Heat of Vaporization	119 kJ/kg
Expansion Coefficient	0.0016 K^{-1}
Vapour Pressure (25°C)	18.4 kPa
Water Solubility	< 5 ppm
***n*-octanol-water partition coefficient (30°C)**	Log Pow: 4.2
Combustion limit range	210 g/m³ / 1070 g/m³

ENVIRONMENT & SAFETY

- Non-flammable
- ODP: 0
- GWP: 48
- Low toxicity
- Avoid thermal decomposition

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ELECTRICAL INSULATION

- Dielectric strength: > 25 kV (2.54 mm gap)
- Dielectric constant (~7.5)
- High resistivity (>10^8 Ω·cm)

THERMAL PERFORMANCE

- Low viscosity → high heat transfer efficiency
- Fast evaporation → efficient cooling & drying
- Stable thermal properties across wide temperature range

Recommended operating range (typical)

- Approx. -100°C to +50°C

MATERIAL COMPATIBILITY

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

- Metals: aluminium, copper, stainless steel, nickel
- Plastics: PE, PP, PET, PMMA, PC, EP
- Elastomers: EPDM, Natural rubber, butyl rubber

SAFETY

- Use only in well-ventilated areas
- Avoid inhalation of decomposition products
- Use appropriate PPE for industrial handling
- Read Safety Data Sheet (SDS) before use

PACKAGING & STORAGE

- Available packaging: 1kg, 5kg, 25kg, 250kg
- Store in closed original containers
- Keep in cool, dry, well-ventilated environment
- Avoid contact with strong oxidizers, acids, and bases

ECONOMIC ADVANTAGES & SUSTAINABILITY

- Efficient cooling due to low viscosity
- Multi-functional (cooling + cleaning + solvent)
- Low consumption in drying applications
- Long service life with stable performance

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