

NuTherm® HT 135

Technical Data Sheet

NuTherm® HT 135

High Performance Heat Transfer Fluid

Description:

NuTherm® HT 135 is a non-flammable, low-viscosity, fast-evaporating hydrofluoroether (HFE) heat-transfer fluid engineered for applications requiring excellent thermal control, rapid heat removal, and safe operation around energized electronics. With a boiling point of 61° C, NuTherm® HT 135 offers highly efficient two-phase heat transfer, superior wetting, and effective cooling for sensitive components and closed-loop systems.

Key Features and Benefits:

- Excellent heat-transfer performance in both single-phase and two-phase cooling
- Non-flammable (ASTM D56), enabling safe use near electronics and heat sources
Low viscosity enhances flow efficiency and reduces pumping energy
- Low surface tension improves wetting, spreading, and thermal contact
- High dielectric strength allows live immersion cooling
- Fast evaporation supports rapid heat removal and vapor-phase cooling
Low toxicity, zero ODP, and low GWP (~320)
- Chemically and thermally stable HFE formulation
- Environmentally responsible alternative to PFAS-based fluids, CFCs, HCFCs, and high-GWP refrigerants



Applications: Thermal Management

NuTherm® HT 135 is optimized for:

Two-Phase Cooling

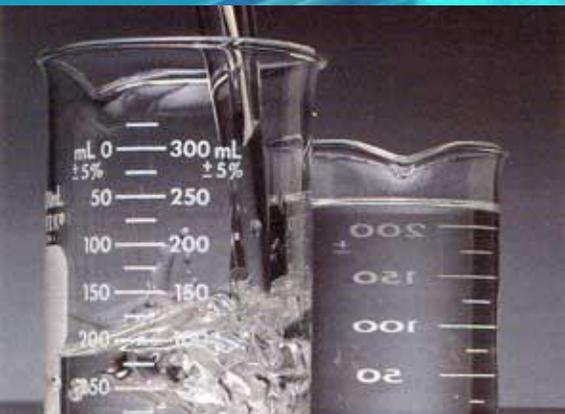
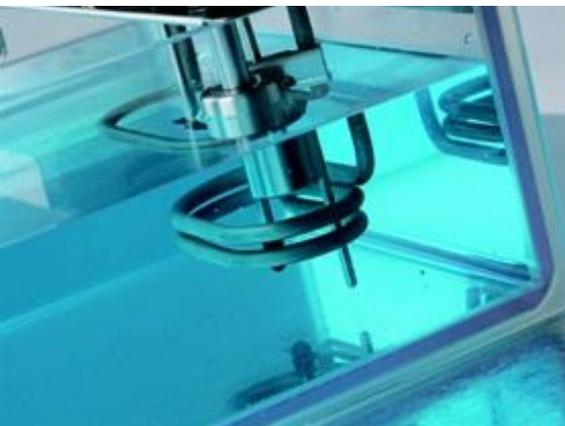
- Immersion cooling for electronics, sensors, and power assemblies
- Vapor-phase cooling systems
- Evaporative cooling loops
- Hotspot mitigation on high-power electronics

Single-Phase Cooling

- Recirculating chiller systems
- Cold plates & microchannel cooling
- Battery thermal management
- Laser and photonics cooling
- Environmental chamber thermal control

Specialized Uses

- Cleaning + cooling hybrid processes
- Electro-mechanical equipment cooling
Equipment needing non-flammable, dielectric-safe thermal fluids



NuTherm[®] HT 135

Molecular Weight	250 g/mol
Boiling Point @ 25°C	61°C (141.8°F)
Pour Point @ 25°C	-135°C (-211°F)
Critical Temperature	195°C (383°F)
Critical Pressure	2.23 Mpa
Vapor Pressure	27 kPa
Heat of Vaporization	112 kJ/kg
Liquid Density @ 25°C	1510 kg/m ³
Kinematic Viscosity @ 25°C	0.38 cSt
Surface Tension @ 25°C	13.6 mN/m
Absolute Viscosity	0.58 cP
Specific Heat Capacity	1183 J/kg-K
Ozone Depletion Potential	0
Global Warming Potential	297

Availability: 5-gallon pails, 55-gallon drums, 275-gallon tote-bins, and bulk tankers.

Shipment: Non-Hazardous for transport via DOT, IMDG, and IATA.

Storage: Store in tightly sealed containers. Protect from moisture and strong bases. Use in well-ventilated areas. Avoid open flames (although the fluid is non-flammable).

Disposal: Dispose of in accordance with local, state, and federal regulations.

Compatibility: Stainless steel, Aluminum, Copper, brass, most plastics and elastomers, ceramics, glass, composites

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EMERGENCY OVERVIEW:

This product may cause serious irritation to the eyes.

SAFETY:

Please make sure you have read and understand the product label and SDS before using this product. Use proper chemical hygiene when handling product. Wash thoroughly after handling. Observe label precautions. This product is classified and labeled according to the Globally Harmonized System (GHS).