

NuTherm® HT 100

Technical Data Sheet

NuTherm® HT 100

High Performance Heat Transfer Fluid

Description:

NuTherm® HT 100 is a non-flammable, thermally stable, low-viscosity engineered heat transfer fluid designed for advanced thermal management applications. Based on proprietary hydrofluoroether (HFE) chemistry, NuTherm® HT 100 provides excellent heat transfer efficiency through both single-phase and two-phase (boil/condense) mechanisms.

Its low global warming potential, zero ozone-depletion potential, chemical inertness, and wide liquid phase temperature range make HT 100 an ideal choice for demanding cooling, immersion, and controlled thermal environments.

Key Features and Benefits:

- Exceptional heat transfer efficiency in both single-phase and two-phase systems
- Non-flammable for improved worker and facility safety
- High dielectric strength enables safe use around energized electronics
- Chemical and thermal stability ensures long fluid life
- Low viscosity & low surface tension improve flow, wetting, and heat exchange
- Low toxicity, low GWP, and zero ODP
- Environmentally responsible HFE chemistry
- Compatible with metals, elastomers, and most plastics
- Ideal replacement for PFAS-based, silicone, and fluorochemical coolants



Applications: Thermal Management

NuTherm® HT 100 is optimized for:

Two-Phase Heat Transfer Systems

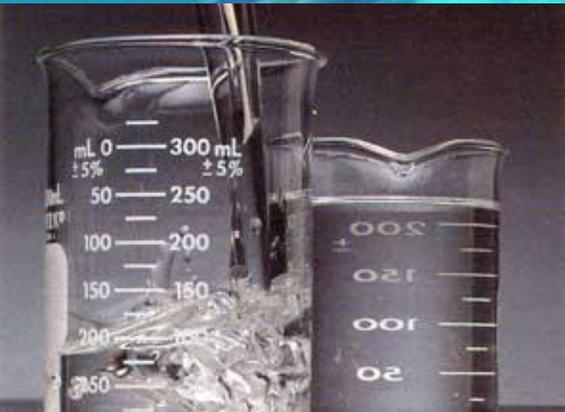
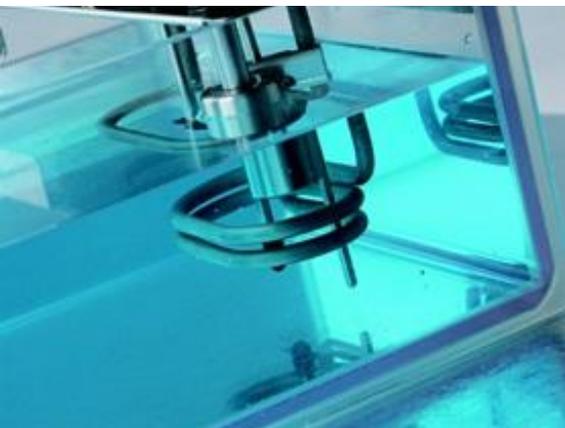
- Immersion cooling (electronics, batteries, data centers)
- Vapor chamber & thermal fin systems
- Evaporative cooling loops

Single-Phase Heat Transfer

- Recirculating chillers
- Heat exchangers & cold plates
- High-voltage cooling loops (due to dielectric strength)

Specialized Cooling

- Power electronics thermal control
- Li-ion battery thermal management
- Sensor cooling & environmental chambers
- Laser cooling and optical equipment



NuTherm[®] HT 100

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|----------------------------|------------------------|
| Molecular Weight | 414 g/mol |
| Boiling Point @ 25°C | 128°C (262.4°F) |
| Pour Point @ 25°C | -100°C (-148°F) |
| Critical Temperature | 261°C (501.8°F) |
| Critical Pressure | 1.55 Mpa |
| Vapor Pressure | 2.1 kPa |
| Heat of Vaporization | 89 kJ/kg |
| Liquid Density @ 25°C | 1614 kg/m ³ |
| Kinematic Viscosity @ 25°C | 0.77 cSt |
| Surface Tension @ 25°C | 16.2 mN/m |
| Absolute Viscosity | 1.24 cP |
| Specific Heat Capacity | 1128 J/kg-K |
| Ozone Depletion Potential | 0 |
| Global Warming Potential | 100 |

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).