MicroCare™

Teres™

High Purity Carrier Fluid

Introduction

Teres™ HPCF (High Purity Carrier Fluid) is a proprietary, fluorinated fluid with zero ozone depletion potential and low global warming potential. It is ideally suited for applications where high purity, materials compatibility, and fast evaporation are paramount. Approved by the US EPA, *Teres* HPCF is produced, filtered, and packaged with the high purity requirements desired by the aerospace, medical, and electronics industries.

Teres HPCF is a non-reactive, thermally, and hydrolytically stable solvent that will solubilize light hydrocarbon oils and greases. Because of its fluorinated nature, it is an excellent solvent for fluorinated lubricants such as Fomblin® and Krytox®. It can be used as a carrier fluid for these lubricants, rapidly evaporating after coating the substrate, leaving a thin, uniform coating.

Teres HPCF is also excellent in removing light particles from delicate substrates. It has a higher polarity than most fluorinated fluids, allowing it to dissipate the electrical charge binding a particle to a substrate. In addition, its high density, low surface tension, and low viscosity facilitates momentum transfer promoting particle removal.

Typical Applications

- Carrier fluid for coatings and lubricants esp. fluorinated lubricants
- Particulate remover
- Cleaning and rinsing agent
- Drying fluid
- Heat transfer media
- Dielectric fluid
- Replacement for high global warming materials, eg. HFCs, HFEs, HCFCs, PFCs, and CFCs

Physical & Chemical Properties

Appearance	Clear, Liquid
Color	Colorless
Odor	Slight, ether
Boiling Point, °C (°F)	51 (124)
Liquid Density, g/ml (lb/gal)	1.38 (11.5)
Surface Tension, dyne/cm	15
Vapor Pressure, mmHg	271
Freezing Point, °C	<-78
Heat of Vaporization @bp, kJ/kg	171.5
Heat Capacity @ 25°C, cal/g°C	0.32
Viscosity (cps)	0.46
Kinematic Viscosity (cSt)	0.33094
Solubility in Water, ppm	1008
Solubility of Water in, ppm	811
Thermal Conductivity (W/m), 23°C	0.1
Breakdown Voltage (kV), ASTM D-877	14.2
KB Value	10
Flash Point, Closed Cup (ASTM D56)	None
LEL/UEL, ASTM E681-09	None

Environmental Properties

Atmospheric Lifetime, days	97
Ozone Depletion Potential (ODP)	0
Global Warming* Potential (GWP/100 yr ITH)	27

Ultrasonic Cleaning

Ultrasonic cleaning is a common, effective cleaning method to remove particles and hard to remove contaminants. High frequency, ultrasonic waves produce microscopic bubbles that form and collapse by cavitation producing high energy waves. These mechanical waves help dislodge particles and contaminants from a surface. Because of its unique blend of low viscosity, and high density, ultrasonic cleaning is ideally suited to be use with *Teres* HPCF.

Plastic, Elastomer, and Metals Compatibility

Teres HPCF is compatible with most plastic, elastomer, and metals. Because of the many types of materials in use, it is recommended that all materials be tested before exposure to *Teres* HPCF.

Teres HPCF is not compatible with strong bases and strong oxidizing agents. Contact with these materials is not recommended.

Storage/Handling

Teres HPCF is thermally stable and does not oxidize or degrade during storage. Store in a clean, dry area. Protect from freezing temperatures. Do not allow stored product to exceed 52°C (125°F) to prevent leakage or potential rupture of container from pressure and expansion.

Refer to the Safety Data Sheet (SDS) for specific handling precautions and instruction.