



F2 CHEMICALS LTD

FLUTEC™ PP1

Chemical Name: Perfluoro-2-methylpentane / Perfluoro-i-hexane
CAS Number : 355-04-4

Description

Flutec PP1, C₆F₁₄, is a fully-fluorinated, odourless, colourless liquid with the following characteristics:

- * Compatibility with most construction materials
- * Excellent chemical and thermal stability
- * Non flammability
- * Practically non-toxic¹

Applications

Flutec PP1 finds many applications such as a cooling fluid for use in variety of electronics industries, a solvent for fluorinated greases and as a heat transfer fluid in organic Rankine engines.

Safety, Handling and Storage

Although Flutec PP1 is considered biologically and chemically inert, good laboratory practice should be observed when handling. Flutec PP1 has an indefinite shelf life if properly stored in its original sealed container. Safety data sheets are available on request.

Environmental

This product has a global warming potential of greater than 150

TSCA - This product is registered on the TSCA inventory under cas number: 86508-42-1 - perfluorocompounds C5-C18. This is a registration for a class 2 substance within the UVCB group. (Variable composition)

VOC – PP1 although Volatile does not classify as a VOC under the current EPA definition of " *Volatile organic compounds (VOC) means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions.*

PFAS – There is no current internationally agreed definition of PFAS. The current ECHA & EPA definition is substances containing one fully fluorinated methyl group (-CF₃) or fully fluorinated methylene group (-CF₂-) without any hydrogen, chlorine, bromine or iodine atom attached to it.

Under this 'family' definition Flutec fluids are classified as PFAS products, however, they do not have the properties of concern that functional PFAS products have. Flutec PP1 is NOT toxic and it does NOT Bioaccumulate.

F-gas : this item is included in the f-gas regulations April 2024.

Country of origin

Manufactured in the United Kingdom

Typical Physical Properties

| | | |
|---|-------|-------------------|
| Boiling Point °C | ..... | 57 |
| Pour Point °C | ..... | -90 |
| Molecular Weight | ..... | 338 |
| Density, kg/l | ..... | 1.718 |
| Viscosity (kinematic), mm ² /s | ..... | 0.39 |
| Viscosity, (dynamic), mPas | ..... | 0.656 |
| Surface Tension, mN/m | ..... | 11.1 |
| Vapour Pressure, mbar | ..... | 294 |
| Heat of vaporisation at Boiling Point, kj/kg..... | | 85.5 |
| Specific Heat, kj/kg °C | ..... | 1.09 |
| Critical Temperature, °C | ..... | 177.9 |
| Critical Temperature, °K | ..... | 451.1 |
| Critical Pressure, bar..... | | 18.34 |
| Critical Volume, l/kg..... | | 1.582 |
| Resistivity ohm.cm | ..... | >10 ¹³ |
| Dielectric Breakdown Strength kV/mm 50Hz..... | | >16 |
| Thermal Conductivity, mW/m °C | ..... | 65.3 |
| Expansion Coefficient, °C ⁻¹ (0°C) | ..... | 0.00159 |

Temperature dependant properties are quoted at 25°C unless otherwise stated.
The above typical physical properties, in no way form or represent product specification.