

TC- 40 Heat Transfer Fluid

Inert dielectric perfluorocarbon (PFC) heat transfer fluid with outstanding dielectric strength. Wide boiling and pour point ranges along with low viscosity and a narrow toxicity profile allow for an expansive range of use. Nonflammable, no auto-ignition point, and noncorrosive.

Applications

- Semiconductor manufacturing
- Supercomputing
- Aviation and military electronics
- Pharmaceutical manufacturing
- Chemical manufacturing

Properties and Usage Benefits

- Compatible with metals, plastics and elastomers
- Low toxicity profile
- Nonflammable for safe working conditions
- Wide range of operating temperatures and pour points
- Residue free and colorless

Material Compatibility

Compatible with most metals, plastics and elastomers.

Safety

HTF fluids are not irritating to the skin and eyes and have a low toxicity profile. HTF heat transfer fluids are not flammable or susceptible to thermal breakdown during storage and normal use.

Properties	
Tyrell Part #	TC-40
Type	PFC
Boiling point	165 °C
Pour point	-66 °C
Density	1.803 g/cm ³
Kinematic viscosity	3.05 cSt
Vapor Pressure kPa @ 25 °C	3.756
Specific heat	1.59 KJ/Kg
Heat of vaporization at boiling point	29 cal/g
Refractive index	1.308
Coefficient of thermal expansion	0.0013 · °C
Surface tension	16.98 dyne/cm
Thermal conductivity	0.067 W/m-K
Dielectric strength	40 kV
Dielectric constant	3.82
Volume resistance	1·10 ¹⁵ Ohm·cm
Average molecular weight	530 amu
Dissipation factor (1 KHz)	1·10 ⁻³
Solubility of water	7 ppm (wt)
Solubility of air	26 cm ³ gas