TYRELL CHEMICAL

TM-HTF-215 Technical Data Sheet

TM-HTF-215 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 #	**TM-HTF-215**
Fisher Scientific Part # (Air Freight)	**502120267**
Fisher Scientific Part # (Sea Freight)	**502120268**
Type	PFC
Boiling point	215 °C
Pour point	-25 °C
Density	1.94 g/cm3
Kinematic viscosity	12 cSt
Vapor pressure	0.02 torr
Specific heat	0.26 cal/g·°C
Heat of vaporization at boiling point	69 cal/g
Refractive index	1.281
Coefficient of thermal expansion	0.001 ·°C
Surface tension	16 dyne/cm
Thermal conductivity	0.07 W/m-K
Dielectric strength	40 kV
Dielectric constant	2
Volume resistance	$1 \cdot 10^{15}$ Ohm·cm
Average molecular weight	820 amu
Dissipation factor (1 Khz)	$2 \cdot 10^{-4}$
Solubility of water	7 ppm (wt)
Solubility of air	26 cm^3 gas

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