INNOVATE™

Faster. Cooler. Cleaner.

INNOVATE™ GARDA

Advanced Immersion Cooling Fluid
For high-performance computing applications

- Single-phase dielectric fluid designed specifically for high-performance computing workloads
- Formulated with our proprietary ultra-pure Highly Refined Alkanes™ technology
- Provides exceptional heat transfer and thermal management through a unique physical profile
- Designed for balanced materials compatibility performance across a wide range of material types
- Designed to meet the latest immersion requirements of the Open Compute Project (OCP)
- Engineered for superior oxidative stability to ensure reliable and consistent performance in service

PROPERTY	UNITS	STANDARD	TYPICAL VALUE
Kinematic Viscosity @ 40°C	cSt	ASTM D445	8.13
Kinematic Viscosity @ 100°C	cSt	ASTM D445	2.37
Specific Heat Capacity @ 25°C	J/(kg-K)	ASTM E1269	1970
Thermal Conductivity @ 25°C	W/m-K	ASTM D7896	0.132
Figure of Merit 1 @ 50°C	—	OCP	50.5
Figure of Merit 2 @ 50°C	—	OCP	30.2
Density @ 15°C	kg/m^3	ASTM D4052	826.9
Pour Point	°C	ASTM D97	-57
Flash Point (Closed Cup)	°C	ASTM D93	154
Water Content	ppm	ASTM D1533	< 20
Color	—	ASTM D1500	< 0.5
Dielectric Strength	kV/mm	ASTM D1816	> 22
Dielectric Constant @ 7.1 GHz @ 25°C	—	TM-mode cavity resonator	2.12

HF SINCLAIR™

PETRO CANADA LUBRICANTS · sonneborn · Sinclair · RED GIANT OIL · HOLLYFRONTIER SPECIALTY PRODUCTS

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