

# Cargill

# NatureCool™

## Immersion Cooling Fluid

The next generation, plant based single-phase immersion cooling fluid.



### Nature derived

- Derived from >90% vegetable oil, a renewable resource
- Readily biodegradable in as little as 10 days
- Non-toxic to humans, soil and water



### Superior fire safety

- 325°C flash point
- Won't self ignite, flames out after heat source is removed



### More sustainable\*

- CO2 neutral
- Global Warming Potential of zero



### More efficient cooling

- 10% higher heat capacity than synthetics

\*Compared to synthetics and bioderived hydrocarbons

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**Cargill**® Helping  
the world  
*thrive*

# Cargill NatureCool™ 1000 Immersion Cooling Fluid

The biodegradable, high-performing and fire-safe choice for immersion cooling dielectric fluid.

**Product Description:** Bio-based immersion liquid for use as a dielectric coolant.

**Material:** >90% natural ester vegetable derived product - renewable raw material source.

**Typical Properties:**

| Property                             | Typical  | Units of Measure                 | Reference Test Method |
|--------------------------------------|--|----------------------------------|-----------------------|
| <b>Appearance</b>                    | Teal , free from sediment and suspended matter | N/A                              | N/A                   |
| <b>Viscosity at 40 °C</b>            | 31   | mm <sup>2</sup> ·s <sup>-1</sup> | ASTM D445             |
| <b>Viscosity at 60 °C</b>            | 19   | mm <sup>2</sup> ·s <sup>-1</sup> | ASTM D445             |
| <b>Viscosity at 80 °C</b>            | 12   | mm <sup>2</sup> ·s <sup>-1</sup> | ASTM D445             |
| <b>Fire Point (by COC)</b>           | 355  | °C                               | ASTM D92              |
| <b>Flash Point (COC)</b>             | 325  | °C                               | ASTM D92              |
| <b>Density at 20 °C</b>              | 0.9206   | (g/mL)                           |                       |
| <b>Specific Heat at 60 °C</b>        | 2.3076   | (kJ/kg°K)                        |                       |
| <b>Thermal Conductivity at 20 °C</b> | 0.1644   | (W/mK)                           |                       |
| <b>Volume Expansion at 20 °C</b>     | 0.00073066                                     | (1/°C)                           |                       |
| <b>Breakdown Voltage</b>             | > 35 kV  | (kV , 2.5 mm gap)                |                       |
| <b>Acid Value</b>                    | < 0.06   | (mg KOH/g)                       |                       |
| <b>Biodegradability</b>              | > 99   | %                                |                       |
| <b>Bio - derived Content</b>         | > 90   | %                                |                       |
| <b>Global Warming Potential</b>      | 0  | %                                |                       |

**Material Compatibility:** It is recommended to verify the chemical compatibility for each application. Some restrictions may exist with materials such as PVC's, certain silicone rubber formulations, and polyurethanes.

**Storage:** Store indoors in the original, closed container; out of direct sunlight at temperatures between 0 to 40 °C.

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