SOLUTHERM™ SAFEGUARD

OAT PG
Heat Transfer Fluid
Technical Data Sheet

Product Overview

SOLUTHERM™ OAT PG is a fully formulated, 2-EHA free, inhibited propylene glycol-based thermal management fluid designed for the unique needs of Direct Liquid Cooling (DLC) primary and secondary circuits in data centres, supercomputers, and adjacent end uses. The fluid offers excellent heat transfer and corrosion protection in these applications. **OAT PG** is a robust formulation for direct-to-chip cooling systems that can help improve facility PUE, increase computing density and decrease data centre footprint when compared with air-cooled systems.

Product Technical Information

SOLUTHERM™ OAT PG leverages a proprietary Organic Acid Technology inhibitor system that offers long-life corrosion protection for copper, brass, steel, cast iron, and aluminum alloys. **OAT PG** offers a great performance evident by industry standard ASTM D8040 testing for corrosion protection and ASTM D4340 testing for high temperature corrosion protection at aluminum heat rejecting surfaces. **SOLUTHERM™ OAT PG** is compatible and well suited for systems which use HNBR, NBR, VMQ, FKM, EPDM, PP, rubbers/elastomers. Additional material compatibility information may be available upon request. **OAT PG** is formulated to be lower toxicity than other glycol-based HTFs and is safe for indoor/outdoor use around humans and animals.

Performance Features and Benefits

- Up to 10 years in a direct liquid cooling computer application when maintained as per equipment manufacturer directions.
- Product protects aluminum, brass, copper, cast iron, and stainless steel against corrosion.
- Product is free of 2-EHA (2-ethylhexanoic acid), molybdate and BNAS (borate, nitrite, amine, silicate).
- Product can be maintained with easy, periodic health monitoring and treatment as needed to extend the lifespan up to 10 years.
- Product offers high temperature corrosion protection for aluminum and is compatible with all aluminum heat exchangers.
- Product is designed to be more environmentally friendly through advanced formulation reducing the toxicity of the fluid compared to similar products.

CONTACT US:
CUSTOMERSERVICE@RECOCHEM.COM
1-800-361-6030

Product Use

SOLUTHERM™ OAT PG is intended for use in Direct Liquid Cooling applications where a water or propylene glycol-based coolant is required. Before the initial fill with **OAT PG**, the system should be prepared by an appropriate flushing procedure followed by complete removal of flushing fluid. **OAT PG** is biocidal and may reduce bacterial colonies by up to 99.99% within 24 hours of exposure. There is no need for additional bio treatment with proper maintenance of glycol concentration.

Once filled, it is natural for **OAT PG** thermal management fluid inhibitor levels to slowly depreciate over time. The fluid may be maintained in the system for up to 10 years with proper fluid monitoring and the addition of recommended boosters provided by the original supplier.

Storage and Disposal

Store **SOLUTHERM™ OAT PG** in the original container in a cool, dry environment away from direct sunlight. When properly stored, the product is suitable for use for up to 10 years after manufacture. Do not use galvanized steel for storage or handling systems. Refer to SDS for product safety information. Discard unused or end of life product in accordance with local, regional, or national regulations.

Specifications

The corrosion inhibitor package in **SOLUTHERM™ OAT PG** Computer Coolant was designed for use with the following OEM and industrial specifications:

- ASTM D6208

- CoolIT 756-00003

PRODUCT OFFERING INCLUDES:

TYPICAL PROPERTIES	SOLUTHERM™ OAT PG 25	SOLUTHERM™ OAT PG 15	SOLUTHERM™ OAT PG Concentrate	SOLUTHERM™ OAT PG Inhibitor Pack
Propylene glycol % weight	25%	15%	86%	Can be customized to prolong the life of fluid in existing systems.
Corrosion inhibitors and water % weight	75%	85%	14%	
Colour	Fluorescent green	Fluorescent green	Fluorescent green	
ASTM Corrosion specification	D8039*	D8039*	D8039	
pH of solution	8.3	7.8-9.0	Depending on dilution	
Pounds per gallon 68°F (20°C)	8.57	8.51	8.84	
Boiling point	214°F (101°C)	212°F (100°C)	Depending on dilution	
Freezing point	15°F (-9°C)	23°F (-5°C)	Depending on dilution	

*ASTM D8039 specification states that Heat Transfer Fluids must contain 30% or more glycol content; fluids not meeting the ASTM specified amount are tested as is using ASTM D8040 and ASTM D1881 and held to the same corrosion and foam control protection specifications stated in the standard.

SOLUTHERM™ THERMAL MANAGEMENT SOLUTIONS

Find out more ▶

www.solutherm.com

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