ZITREC® EC

OAT Technology based liquid cooling fluids for data centers

In an era driven by advancement in technologies such as AI, there arises a demand for CPUs and GPUs with higher thermal design power and lower-case temperatures. Hence efficient and sustainable data center cooling has become paramount.

Traditional air-cooling methods fall short in keeping pace with the demands of cutting-edge technologies. Water, renowned for its superior heat transfer capabilities, emerges as a viable alternative. However, heat transfer capacity is just one of several factors to consider. Material protection and Total Cost of Ownership (TCO) also play significant roles. A meticulously chosen additive package that is compatible with all present materials—including metallurgy, elastomers, and plastics—is essential for minimizing installation costs, reducing maintenance needs, and maximizing uptime.

To solve this, Arteco introduced water glycol heat transfer fluids based on OAT (organic additive technology) via our portfolio of Zitrec® EC range of products, offering innovative solutions tailored for a wide range of electronic applications, especially Cold Plate cooling applications.

Product Benefits

Optimal Thermal Performance

- Multiple base fluid options like water/PG/EG
- With advanced formulations
- Improves Power Usage Effectiveness (PUE) and reduces energy consumption

Advanced Corrosion Protection

- Patented organic inhibitors and selected additives
- Long-lasting corrosion resistance
- Protects critical system components

Material Compatibility

- With metals such as copper, (stainless) steel, aluminium, brass, ...
- Various elastomers and thermoplastics

Applications

- Versatile solutions for both Facility Water System (FWS) and Technical Cooling System (TCS) loops

Environmental Responsibility

- Propylene Glycol derived from recycling and purification of de-icing fluid
- No environmental concerns
- Readily biodegradable

Safety

- Low toxicity options
- Safe handling and operation
- Free from nitrites, borates and 2-EHA

Global availability

- Offices worldwide

Product Portfolio

Using Organic Additive Technology

Product	ZITREC® EC 10 Water Based	ZITREC® EC 20 PG Based	ZITREC® EC 30 EG Based*	ZITREC® EC 40 EG Based*
Value Proposition	Most optimal heat transfer properties closest to water	Extra low toxicity due to using propylene glycol as base fluid	Inhibits adverse effects of aluminium brazing	Minimizes electrical risks in the unlikely event of a leak
Freeze & boiling protection		✓	✓	✓
Patented (corrosion) inhibitor package	✓	✓	✓	✓
Readily biodegradability	+++	++	++	++
Low toxicity	+++	++	-	-
Worldwide available	✓	✓	✓	✓
Low electrical conductivity				✓
Elastomer compatibility	EPDM, HNBR, NBR, FKM, Silicone, ...			
Metallic compatibility	(Cast) Iron, (stainless) steel, copper, aluminium, brass, combinations & alloys.			

*Also available PG based on request

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Should you have questions with regards to Arteco's Zitrec® EC fluid technologies, please do not hesitate to send your inquiry to

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