

Zitrec® EC 30

x-OAT technology

Zitrec® EC 30 is an ethylene glycol (EG)-based heat transfer fluid customized for datacenters and other electronic applications. Developed with Organic Additive Technology (OAT), this heat transfer fluid provides excellent corrosion protection, increased oxidation stability and an aluminium controlled atmosphere brazing (CAB) flux compensation package. Cooling systems using glycol-based heat transfer fluids like **Zitrec® EC 30** offer a compelling solution to the data center cooling dilemma, with potential advantages spanning energy efficiency, environmental impact, and operational resilience.

Zitrec® EC 30 is designed to combine excellent heat transfer capacities with freezing and biofouling protection in electronic applications.



PRODUCT BENEFITS



Thermal properties

Compared to PG solutions:

- Lower freezing point and higher boiling point;
- Lower viscosity;
- Higher thermal conductivity.



Material compatibility

- Safeguarding critical metals such as copper, aluminium, brass and (stainless) steel;
- High compatibility with different elastomers and thermoplastics.



Robustness

- Long-lasting protection thanks to the OAT backbone;
- Excellent stability avoiding formation of insoluble deposits;
- Superior oxidation and pH stability at high temperatures, resulting in limited amount of glycol degradation acids;
- Aluminium Controlled Atmosphere Brazing (CAB) flux compensation package;
- Biostatic.



Environment and safety

- Carefully selected additives to minimise environmental impact;
- Free from nitrites, borates and 2-EHA,
- Contains a bitterant agent.

Application

Arteco's **Zitrec® EC 30** is designed as a liquid heat transfer medium for a wide range of applications. Some examples where **Zitrec® EC 30** is suitable for: **liquid cooled Direct-to-Chip applications, HPC (High Performance Compute), Overclocking and Datacom Equipment Center Cooling.**



Power Electronics



Edge Computing



Servers



High Performance Computing

Zitrec® EC 30 is available in various EG/water concentrations depending on the system requirements.

Elastomer, plastic & metallic compatibility

Zitrec® EC 30 has an improved elastomer, plastic & metallic compatibility:

- EPDM, PTFE, PVDF, NBR, HDPE, AFLAS, PFA, PPS, PPO, PEEK, PFPE/PTFE, ...
- Copper, Aluminium, (Stainless) Steel, Brass, ...

Toxicity & safety

For Toxicity and Safety Data we refer to the Safety Data Sheet. The information and advice given should be observed and due attention should be given to the precautions necessary for handling chemicals. This product should not be used to protect the inside of drinking water systems against freezing. This products contains denatonium benzoate as bitterant agent.

Packaging

Arteco's **Zitrec® EC 30** is available in the following packs & colours:



IBC 1000L



Colour options upon request

Contact details

Should you have questions with regards to Arteco's **Zitrec® EC 30**, related to available packages or colours or on one of the other Arteco solutions, please do not hesitate to contact your local Area Sales Manager or send your inquiry to info@artecco-coolants.com.

Addendum - Technical information

Chemical and Physical Properties - 25% ethylene glycol

Property	Zitrec® EC 30 25% EG	Unit	Method
Appearance	clear to slightly hazy		
Ethylene glycol	25	vol.%	
Density (15°C)	1.045	kg/l	ASTM D5931
Density (20°C)	1.043	kg/l	ASTM D5931
Density (29.5°C)	1.039	kg/l	ASTM D5931
Freezing point	-14	°C	ASTM D1177
Boiling point	103	°C	ASTM D1120
pH (20°C)	8.7		ASTM D1287
Reserve Alkalinity	2.4	ml	ASTM D1121
Refractive Index (20°C)	1.365		ASTM D1218
Nitrite, borate, 2EHA	-		
Microbiological control - bacteria	0	cfu/ml	

Chemical and Physical Properties - 54% ethylene glycol

Property	Zitrec® EC 30 54% EG	Unit	Method
Appearance	clear to slightly hazy		
Ethylene glycol	54	vol.%	
Density (15°C)	1.083	kg/l	ASTM D5931
Density (20°C)	1.080	kg/l	ASTM D5931
Density (29.5°C)	1.074	kg/l	ASTM D5931
Freezing point	-45	°C	ASTM D1177
pH (20°C)	7.9 - 9.0		ASTM D1287
Reserve Alkalinity	3.1	ml	ASTM D1121
Refractive Index (20°C)	1.393		ASTM D1218
Nitrite, borate, 2EHA	-		

Shelflife & storage requirements

Zitrec® EC 30 can be stored for minimum 3 years in unopened containers without any effect on the product quality or performance. The product should be stored above -14°C for the 25% EG version and above -45°C for the 54% EG version. Periods of exposure to temperatures above 35°C should be minimised.

It is strongly advised not to expose the fluid in translucent packages to direct sunlight because this can result in fading of the colour or discoloration over time. This reaction can be accelerated if coupled with high ambient temperatures.

It is therefore advisable to store the fluid indoors, to use new and not recycled containers and where possible packages with a UV filter. As with any heat transfer fluid, the use of galvanised steel is not recommended for pipes or any other part of the storage/mixing installation and for packaging.

Compatibility and mixability

Zitrec® EC 30 is compatible with most other heat transfer fluids based on glycol and water. Exclusive use of **Zitrec® EC 30** is however recommended for optimum performance.

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