

## Zitrec<sup>®</sup> EC 30

### x-OAT technology

**Zitrec<sup>®</sup> EC 30** is an ethylene glycol-based heat transfer fluid customized for servers and other electronic applications, specifically which are transported to different regions with varied environments and where freezing and boiling protection is required. Developed with Organic Additive Technology, this concentrated heat transfer fluid provides excellent corrosion protection and increased oxidation stability. Cooling systems using glycol-based heat transfer fluids like **Zitrec<sup>®</sup> EC 30** offer a compelling solution to the data center cooling dilemma, with potential advantages spanning energy efficiency, environmental impact, and operational resilience. The Direct-to-chip approach utilizes flexible tubes to channel **Zitrec<sup>®</sup> EC 30** directly to a cold plate situated above the heat-generating components like processing chip, CPU<sup>1</sup> or GPU<sup>2</sup>.

**Zitrec<sup>®</sup> EC 30** is designed to combine excellent heat transfer capacities with freezing and boiling protection in electronic applications.



## PRODUCT BENEFITS



### Thermal properties

- Low freezing point and high boiling point
- Low viscosity
- High thermal conductivity



### Material compatibility

- Safeguarding critical metals such as copper, 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



### Environment and safety

- Carefully selected additives to minimise environmental impact
- Free from nitrites, borates and 2-EHA.

<sup>1</sup> CPU: Central Processing Unit  
<sup>2</sup> GPU: Graphics Processing Unit

## Application

Arteco's **Zitrec® EC 30** is designed as a liquid heat transfer medium for a wide range of applications where freezing and boiling protection is required. 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*

## 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, (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.

## Packaging

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



**IBC 1000L**



Colourless

## 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](mailto:info@artecco-coolants.com).

**Addendum - Technical information**

**Chemical and Physical Properties**

Property	Zitrec® EC 30	Unit	Method
Appearance	clear to slightly hazy		
Ethylene glycol	> 92	% w/w	
Nitrite, borate, 2EHA	-		
Freezing point (50% dilution)	-37	°C	ASTM D1177
Boiling point	177	°C	ASTM D1120
Specific gravity (20°C)	1.124 typ.	kg/l	ASTM D5931
pH (20°C)	8.6 typ.		ASTM D1287
Reserve Alkalinity	> 4	ml	ASTM D1121

## 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 -20°C and preferably at ambient temperatures. 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 ethylene glycol and water. Exclusive use of **Zitrec® EC 30** is however recommended for optimum performance. As for any heat transfer fluid, we recommend the use of deionised or distilled water to prepare the ready-to-use dilutions for optimal performance and controlled quality.

It is recommended to use at least 33vol% of **Zitrec® EC 30** in the solution. This provides an initial freezing point of -18°C. Mixtures with more than 70 vol% **Zitrec® EC 30** in water are not recommended.

We refer to our product information leaflet on water quality recommendations. Contact your local Area Sales Manager for more information.

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