

## Zitrec® EC 30

### x-OAT technology

**Zitrec® EC 30** is an ethylene glycol (EG)-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 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. The Direct-to-chip approach utilizes flexible tubes to channel **Zitrec® 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® 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, 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



### Environment and safety

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

<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*

**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 product contains denatonium benzoate as bittering 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](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 glycol and water. Exclusive use is however recommended for optimum performance.

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

*The information contained in this Product Information Leaflet is intended to provide the customer and/or end-user with an understanding of the properties of the product, it being understood that this information may not be construed as any express or implied warranty that the product is suitable for a specific use or application.*

*All information contained in this Product Information Leaflet, including but not limited to text or graphic material, is the property of Arteco NV, is accurate to the best of our knowledge at the date of issue specified, supersedes all previous editions and information contained in them, and is subject to change without notice.*

*Any textual or graphic material you copy, print, or download from this Product Information Leaflet is for your personal, non-commercial use only, and you not change or delete any copyright, trademark or other proprietary notices. Any other use, including but not limited to the reproduction, distribution, display or transmission of the content of this document is strictly prohibited, unless authorized by Arteco NV in writing.*

Version 202401-v00