

FREECOR EV
Milli 30

Base Fluid: MEG

Application:

Power Train:

Technology: P-OAT

Freecor® EV Milli 30 is **a low-electrical-conductivity coolant,** based on phosphorus containing organic additive technology (P-OAT). It has been specifically developed for indirect cooling in the battery cooling loop of battery-electric vehicles (BEVs). The product is also suitable for complex cooling systems in which the indirect cooling of the battery, electric motor and power electronics is interconnected. This coolant contains a flux compensation package that helps counteract the negative effects of residues formed during the brazing of aluminium parts. This product is intended exclusively for vehicles designed to operate with low-electrical-conductivity fluids, which are required to ensure the safety of indirect battery cooling loop.

Product benefits & key features of Freecor® EV Milli 30

- **P-OAT** — High performance P-OAT technology
- Low electrical conductivity (<100 µS/cm)
- Long-term electrical stability
- Flux compensation package
- Heat transfer
- Corrosion, cavitation, erosion protection
- Boiling protection
- Freeze protection

2-EHA, nitrite- and borate-free technology

Colour and Packaging

Packaging	Colour
• IBC 1000 L • Drums 208/210 L • Pails 20 L	Blue Other colours are available on request.

Key approvals, standards and specifications

Arteco is active in multiple working groups across the globe. As a result, Freecor® EV Milli 30 complies with the following standards:

GB 29743.2 - 2025 **ASTM D8566**

For the complete overview and further details, please consult Arteco's Product Finder.

Application

Freecor® EV Milli 30 is specifically designed as a liquid heat-transfer medium for the indirect cooling of battery cells, modules, and packs where coolants with low electrical conductivity are required. As a 50 v% ready-mix, the coolant has a freezing point of −37 °C and a boiling point of 108 °C. Freecor® EV Milli 30 is miscible with other fluids within a similar electrical conductivity range.

Arteco recommends using Freecor® EV Milli 30 only in vehicles designed to operate with low-conductivity fluids. In uncontrolled cases of system design, materials, or temperature exposure, a premature increase in electrical conductivity may occur, resulting in reduced safety and corrosion protection.

It is crucial to verify the coolant's suitability for the intended application. For vehicles equipped with a combustion engine, please refer to our Freecor® range. For fuel-cell electric vehicles, please refer to our non-ionic coolant technology.

Arteco coolants are not suitable for immersive-cooling applications where direct electrical contact is possible.

Toxicity & Safety

For information on toxicity, safe handling, and product disposal, please refer to the Safety Data Sheet.

Freecor® EV Milli 30 contains a bitterant by default to comply with EU legislation.

Shelf Life & Storage Requirements

We recommend testing the coolant's electrical conductivity and pH before it is added to the system as standard practice, especially when the product has been stored for more than one year. Freecor® EV Milli 30, both as a ready-mix and as a concentrate, can be stored for 24 months at a maximum of 30 °C in unopened containers without affecting product quality or performance. It is strongly recommended to use new, non-translucent containers, preferably with a UV filter where possible. Direct sunlight and high temperatures can degrade the product. Freecor® EV Milli 30 should be stored above −20 °C and below 30 °C. Exposure to temperatures above 35 °C should be minimised.

Handling Instructions

Freecor® EV Milli 30 can be obtained by diluting Freecor® EV Milli CC 30 with the required amount of demineralised water to ensure optimal performance, controlled quality, and optimal conductivity levels. The recommended use concentration is 50 v%. Freecor® EV Milli 30 should neither be topped up nor diluted. The use of tap water is prohibited, as it can lead to an increase in electrical conductivity. Please consult our Information Leaflet on water quality recommendations for more information.

Proper and careful handling is essential to maintain the product's integrity and to prevent contamination, which can negatively impact performance and increase safety risks.

For more information on product handling, please refer to our leaflet with detailed handling instructions.

Technical Information

Chemical and physical properties of Freecor® EV Milli CC30*

Property	Typical value	Unit	GB 29743.2 requirements	GB 29743.2 test method	ASTM D3306 requirements	ASTM D3306 test method
Density (20 °C)	1.112	kg/L	1.108 – 1.144	SH/T 0068, SH/T0604	1.110 – 1.145	ASTM D1122
Reserve alkalinity (pH 5.5)	2.1	mL HCl	report	SH/T 0091	report	ASTM D1121
pH (20 °C)	7.9		7.0 - 10.0 (50% ready mix)	SH/T 0069		ASTM D1287
Foaming tendency	50 // 2	mL // s	100 // 5	SH/T 0066	150 // 5	ASTM D1881

**Typical Value*

Chemical and physical properties of Freecor® EV Milli CC30 in water*

Property	50 v%	Unit	GB29743.2 test method	ASTM D3306 test method
Freezing point	−38.5	°C	SH/T 0090	ASTM D1177
Boiling point	111	°C	SH/T 0089	ASTM D1120
Density (20 °C)	1.066	kg/L	SH/T 0068, SH/T0604	ASTM D1122
pH (20 °C)	8.2		SH/T 0069	ASTM D1287
Kinematic viscosity (20 °C)	3.7	mm^2/s	-	ASTM D445
Reserve alkalinity (pH 5.5)	1.1	mL HCl	SH/T 0091	ASTM D1121
Refractive index (20 °C)	1.385		-	ASTM D1218
Electrical conductivity (25 °C)	80	µS/cm	GB29743.2	ASTM D1125

**Typical Value*

More technical information is available on request: info@arteco-coolants.com

Explanation of Product Benefits

Low electrical conductivity (< 100 µS/cm)

Minimises electrical safety risks in case of accidental contact with low- and high-voltage components. Risks range from pressure increases due to gas formation and hydrogen gas build-up, to external short circuits triggering rapid battery discharge, internal cell damage, and even thermal runaway if the situation is not properly managed.

High performance P-OAT technology

P-OAT

Provides corrosion protection with a combination of P-based and organic corrosion inhibitors. Ensures best-of-both-worlds corrosion protection with high inhibitor stability and low depletion rates.

Long-term electrical stability

Freecor® EV Milli 30 remains stable over time thanks to its proprietary inhibitors and stabilisers. It resists electrical conductivity spikes upon contact with brazed aluminium surfaces and helps maintain the initial safety benefits by stabilising conductivity levels.

Flux compensation package

Protects against brazing-flux-related corrosion of aluminium parts and prevents coolant degradation. The Arteco Freecor® EV Milli products are the first of their kind to provide this level of protection. The flux compensation package maintains protective properties and low electrical conductivity throughout the coolant's service life.

Heat transfer

Supports faster charging cycles by maintaining optimal operating temperatures. It improves energy efficiency by keeping thermal conditions stable during operation, and it enhances heat recuperation within the thermal management system.

Corrosion, cavitation, erosion protection

Safeguards metals against corrosion and prevents material degradation over time.

Boiling protection

Prevents boiling at elevated temperatures, maintaining system stability and preventing damage.

Freeze protection

Prevents freezing in cold climates and extends system longevity with appropriate freeze-protection properties.

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ENGENIOUS COOLANTS

DISCOVER OUR ECO COOLANTS

All our coolants are also available in ECO versions.



Reduced product carbon footprint

compared to their virgin fossil-based equivalents

Trusted quality and performance

Statements regarding environmental benefits, CO_2 reductions and other sustainability-related performance characteristics of the product(s) referenced herein are based on recognised scientific evidence and internal and/or external data available to us at the time of publication. Actual environmental performance may vary depending on use, conditions, and context. Supporting data and methodology are available on request (info@arteco-coolants.com). This information is provided for transparency purposes and does not constitute a guarantee of performance in all circumstances.

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Why Choose Arteco?

Arteco is a joint venture between Chevron and TotalEnergies, with more than 25 years of expertise in developing, producing, and marketing high-performance coolant technologies. As a trusted global player in the automotive, data center, and industrial sector, we deliver reliable and forward-looking thermal solutions tailored to evolving market needs.

At Arteco, we focus on more than supplying products; we are committed to building genuine partnerships and offer a wide range of services to support and strengthen our partners' success. We are pioneers in Organic Additive Technology (OAT) and continue to lead innovation in advanced coolant formulations. Quality is central in everything we do: all our production sites and subcontractors are certified to rigorous quality-management standards, including IATF 16949:2016, ensuring consistency, safety, and performance. Partnering with Arteco means choosing proven excellence, cutting-edge technology, and a long-term commitment to cooperation.






For All Enquiries

For questions about Freecor® EV Milli 30, available packages, colours, or other Arteco solutions, please contact your local Area Sales Manager or send an enquiry to **info@arteco-coolants.com.**

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Version 202610-v01.1