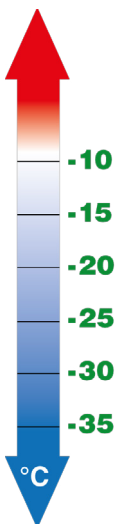


ECO MPG



General Properties

Appearance	Colourless to pale yellowish
Boiling point	100-105 °C
Density	1022-1042
pH	7-9

Performance

ECO MPG has good fluid properties in terms of viscosity, specific heat and thermal conductivity. This makes ECO MPG the ideal choice of Heat Transfer Fluid (HTF) within its temperature range in comparison with other green ECO HTF.

Areas of Use

ECO MPG is to be used in all closed secondary cooling systems, heat recovery and solar heat plants. With Temper Technology's ECO MPG excellent performance is also achieved in applications such as:

- Food industry
- Cold stores
- Super markets
- Breweries & beverages
- Solar plants
- Sport arenas
- Pharmaceutical industry

Material Compatibility

Most of the common materials can be used such as copper, bronze, brass (dezincification resistant), steel, stainless steel, cast iron, as well as plastic pipes (ABS, PE). Plastic materials must be suitable for the system's minimum and maximum temperatures.

High temperatures involve an increased risk of corrosion. Selection of materials must therefore take into account the operational temperature within the system. The higher the temperature, the better the quality of the materials is recommended. Galvanized steel is not recommended to use together with ECO MPG.

ECO MPG, the best environmental choice of MPG

Temper Technology's ECO MPG is the best choice on the market due to its very low carbon footprint. ECO MPG reduces CO₂ balance with as much as 70% compared to petroleum-based propylene glycol. ECO MPG is based on an inexhaustible supply of renewable raw materials.

ECO MPG is a ready-mixed mono propylene glycol solution with an efficient corrosion inhibitor package and is readily biodegradable. It is available in six different freezing points -10, -15, -20, -25, -30 and -35°C.

ECO MPG consists of propylene glycol (MPG) from renewable sources. Propylene glycol is an ingredient generally recognized by FDA as safe.

Advantages

- Renewable raw material
- Non- toxic
- Well-know product
- Compatible with virtually all construction materials
- Readily biodegradable
- Suitable for food industry

Thermophysical Properties

	Unit	ECO MPG-10	ECO MPG-15	ECO MPG-20	ECO MPG-25	ECO MPG-30	ECO MPG-35
Density	kg/m ³	1022	1031	1034	1038	1040	1042
Specific heat	KJ/kg • K	3,950	3,849	3,778	3,688	3,601	3,575
Thermal conductivity	W/m • K	0,482	0,451	0,432	0,386	0,370	0,357
Dynamic viscosity	mPa • s	2,74	3,37	4,37	5,22	6,89	7,16
Kinematic viscosity	mm ² /s	2,68	3,27	4,23	5,03	6,63	6,87

Measurements are performed @ +20 °C

ECO MPG

Corrosion Protection

Without any adequate treatment, aqueous solutions (such as coolants, antifreezes, heat transfer fluids) circulating in closed circuits, are increasing the risk of corrosion. To reduce these risks, powerful anti-corrosion additives are developed, complying with all specific requirements for this application, and offering numerous advantages: multi-metal protection, resistance at high temperature, long-term efficiency etc.

The optimal corrosion package creates, and only when necessary, a local temporary and very thin protective layer with a minimal (monomolecular) thickness at the metal surface. This allows very good heat transfer.

The inhibitor blend doesn't contain any nitrite, borate, phosphate or molybdate.

Analysis & Technical Support



It is recommended to regularly check the fluid in respect of parameters such as pH, freezing point (density), metal ions and corrosion inhibitor level. With a test kit you may easily check freezing point (density) and pH value. More advanced analysis can be performed, such as metal ions concentration and corrosion inhibitor level to secure the well functioning of the system. Along with the test result, a complete report with conclusion and recommended actions is always provided.

For technical support contact techsupport@temper.se

Environment

ECO-MPG reduces the CO₂ footprint with no less than 70% compared to petroleum-based propylene glycol. ECO-MPG is based on an inexhaustible supply of renewable raw materials.

Health and Ecotoxicological information

For 100% Propane-1,2-diol CAS-nr 57-55-6, EG-nr 200-338-0:

Non toxic to mammals

LD50 (oral, rat) > 2000 mg/kg

LD50 (dermal, rat) = 22500 mg/kg

LD50 (dermal, rabbit) = 20800 mg/kg

Non toxic to aquatic animals

LC50 (fish, 96h): 51400 mg/l [Pimephales promelas]

EC50 (Daphnia, 48h): 34400 mg/l [Daphnia magna]

The product is not classified as dangerous for the environment

The components contained in the product are readily biodegradable.

Do not bio-accumulate

The freezing point depression substances in ECO MPG is made of propylene glycol which is an ingredient generally recognized by FDA as safe.



Packaging

ECO MPG is supplied in the following packaging, as well as bulk deliveries:



25L blue canister made of PE with sealed cap, the canister's weight is 1,2 kg.



208L blue barrel made of PE, with a sealed cap, the barrel's weight is 9,0 kg.



1000L black IBC, the IBC weight is 70,0 kg. Outlet valve NW 50

Storing, Handling & Transport

Store in tightly closed original containers not below its freezing point. Avoid contact with eyes and skin. When transporting ECO MPG, there are no restriction since the product is not classified. Further information can be found in the safety data sheet.

Further Information

For more information contact Temper Technology AB, visit our website or consult your local distributor.

ISO
Temper Technology is
Certified according to
9001:2008

tempertechnology

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