

The natural and renewable alternative
to traditional heat transfer fluids

Follow the Greenway®



climalife®



Greenway[®] : one more step on the path of change

Climalife are recognized experts at formulating proven heat transfer fluids (HTF) for over 30 years and are strongly committed to solutions derived from organic plant resources.

THE TARGET OF CLIMALIFE

To provide relevant and effective **technical alternatives to traditional fluids based on petrochemical** propylene glycol (MPG). Thus, our R&D have developed a range of solutions containing glucose syrup from a 100% vegetable and renewable source.

THE RESULT

- A unique range of ready to use formulas to meet the needs of the refrigeration, central heating systems and renewable energy markets.
- Positive technical advantages for each application
- The only bio-sourced range to have obtained the AFSSA approval and agreed by the French Health Ministry.

With the Greenway[®] range, Climalife offers the market **a range of opportunities to enhance the credibility of their sustainable approach and to reduce their energy and ecological footprint.**



REFRIGERATION AND CENTRAL HEATING

Until now there has been no alternative to traditional HTF that is not harmful or environmentally friendly to help users in their efforts to reduce energy costs and carbon footprint.

? How to reduce carbon footprint while reducing operating costs of thermal systems?

↳ Benefits of Greenway® RTU for new installations:

Because of its low viscosity, it requires less energy to be pumped compared to MPG :

- At -30°C: 14 times less energy is required
- At -10°C: 3 times less energy is required

NB : Estimate based on equivalent heat transfer.

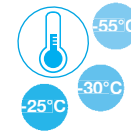


REFRIGERATION / AIR CONDITIONING SYSTEMS

- Reduces primary energy consumption
- Optimizes pump and pipe sizing (depending on the system design study)
- Reduce carbon footprint

UNDERFLOOR HEATING / CENTRAL HEATING SYSTEMS

- Is cleaner and more environmentally friendly
- Long-term antifreeze and corrosion protection
- High stability properties over the long term



HEAT PUMP SYSTEM

With the buried pipe-work containing the HTF, in direct contact with the ground, there is a potential risk for the environment, should leakage occur.



? How to keep efficient heat transfer and minimize the risk of ground and water pollution?

↳ Greenway® Heat Pump addresses this issue:

- It has efficient energy transportation
- It is highly biodegradable, it minimizes environmental impact in case of leakage
- It protects against corrosion and freezing because of its long-term organic inhibitors.



HEAT PUMP SYSTEMS

- Good thermal transfer
- Minimizes environmental consequences in case of leakage

 = available freezing points

THERMAL SOLAR

An increasing number of solar systems are suffering from accelerated ageing of the glycol and above 150°C, the degradation becomes irreversible and creates acids (characteristic brown colour).

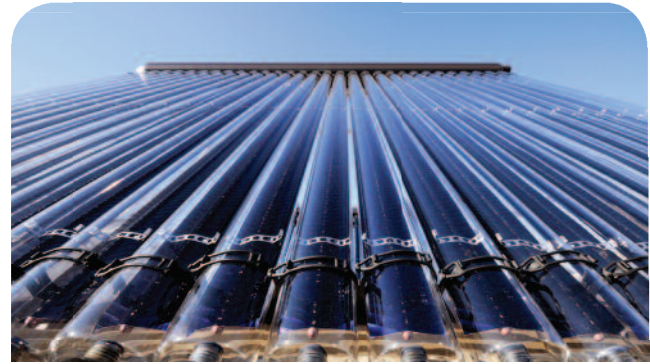
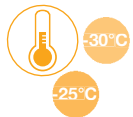
Thus a negative chain reaction is activated:

- Loss of system efficiency from lower heat transfer capacity
- Strong constraints on the pump: increased viscosity and, ultimately, blockage in low flow areas
- Risk to the system functionality: increased freezing point and corrosion risks
- Decreased overall efficiency and high maintenance costs

? So, how do you **prevent risks** associated with accelerated aging of the HTF ?
How to **extend the life of the system** and its "lifeblood", the HTF?

→ The Greenway® Solar offers definite advantages over a MPG based solution :

- Degradation exceptionally lower: 4 times lower at 150°C
- Reduced expansion: more than 2 times lower at 100°C
- High stability of its technical characteristics over time
- Equivalent viscosity and head losses

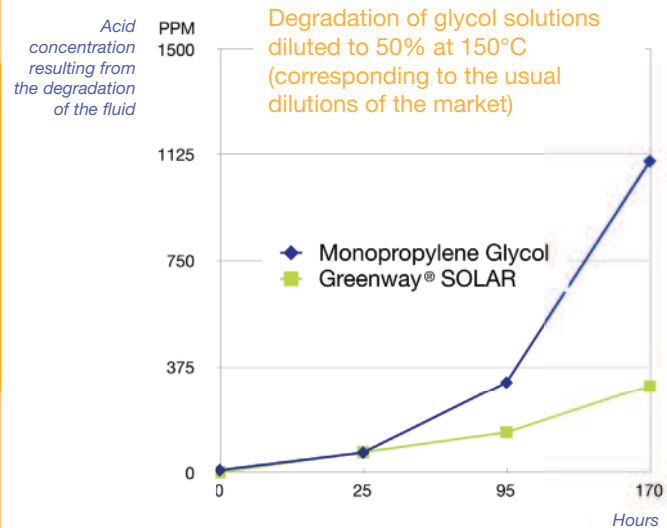


HIGH CONSTRAINT SYSTEMS

Particularly at risk, high stress installations* need Greenway® Solar to:

- Resist and effectively respond to the problems of overheating periods
- Increase service life and protect long-term effectiveness.
- Avoid blockages leading to system failure.
- Maintain return on investment.

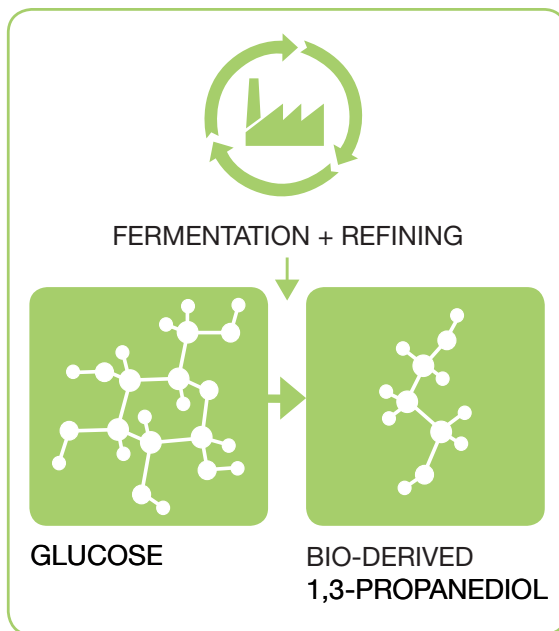
*i.e : - facilities subject to periods of non use, repeated overheating or stagnation periods (eg schools),
- evacuated tube systems, etc



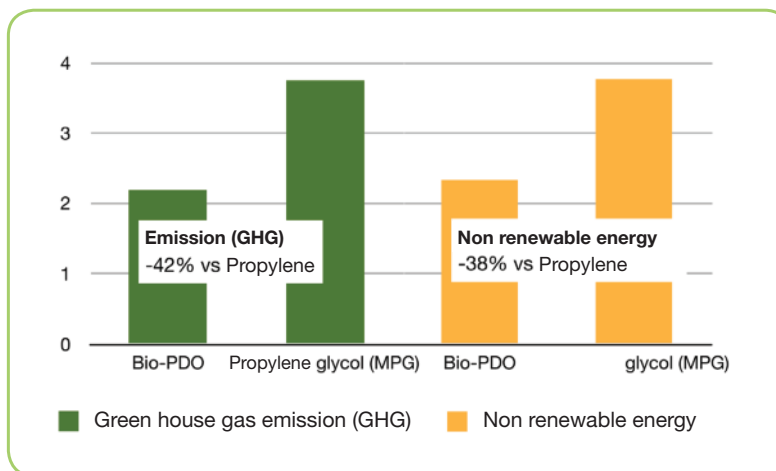
A CLEANER PRODUCTION PROCESS...



PLANTS
(PHOTOSYNTHESIS)



... THAT MAKES A REAL ENVIRONMENTAL DIFFERENCE.





climalife®

dehon service SA
26, avenue du Petit Parc F- 94683 Vincennes Cedex
Tél. : +33 1 43 98 75 00 - Fax : +33 1 43 98 21 51
contact@climalife.dehon.com

www.climalife.dehon.com