

Product Reference Guide

Heat Transfer Fluids

blended

experts in specialty chemicals & gases



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For over 20 years, we have been a leading provider of specialty chemical and gas products to both national and global brands.

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Speciality Fluids

Blended Fluids offers a comprehensive range of high-performance heat transfer fluids suitable for diverse applications requiring glycol-blended heating and cooling liquids. Our glycol-based Thermablend range is supplemented by our Serviceblend range of maintenance chemicals.

Our specially formulated heat transfer fluids are available in neat form or pre-blended (IND or MPG) to meet specific requirements, providing an efficient solution for applications with lower energy costs. Thermal Xcellence is a non-hazardous glycol-blend heat transfer fluid containing top-tier multi-metal corrosion and scale inhibitors to prevent internal corrosion and scaling, minimising downtime.

blendedfluids Team

Our values as a team are built around the needs of our customers with a focus on ensuring that we always deliver the highest standards in the quality of our products and the service we provide.

Our job is to deliver solutions, solve problems and use our expertise to support your business, whether it's resolving a critical issue or drawing on our product knowledge and innovation to solve complex challenges.

Together, we are **Blended.**



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serviceblend

Fluids for Servicing & Maintenance

A line of supplementary products that are specially formulated to assist in the servicing and maintenance of closed-loop heating and cooling systems, and designed to work optimally with our range of Heat Transfer Fluids.

What is Available?

- **Serviceblend AIR:** 2-in-1 biocide and inhibitor solution
- **Serviceblend BIO:** aqueous, broad spectrum biocide solution
- **Serviceblend INH:** NSF approved multi-metal corrosion and scale inhibitor
- **Serviceblend OAT:** ultra-high performance organic acid-based inhibitor
- **Serviceblend PRE:** pre-cleaner which loosens, mobilises and dissolves corrosion deposits
- **Serviceblend PUR:** deionised/de-mineralised water

Product Sizes

- 1000 ltr
- 220 ltr
- 25 ltr
- 20 ltr
- 10 ltr
- 1 ltr



serviceblend AIR

Serviceblend AIR is an all-in-one biocide and inhibitor solution for use in air source heat pumps and closed loop heating and cooling systems.

The formulation contains a premium, NSF approved multi-metal corrosion and scale inhibitor. In addition, Serviceblend AIR contains a high-performing biocide, which is stable across temperatures used within most domestic and commercial heating and cooling systems.

Serviceblend AIR is a pre-mixed additive for easy installation, with 1 litre of Serviceblend AIR offering market leading protection for up to 180 litres of water. Using Serviceblend AIR helps maintain optimal thermal conductivity whilst preventing unnecessary maintenance.

All-in-one

Serviceblend AIR rules out the need to manually measure the biocide and inhibitor as separate additives for easier installation.

BS 7593:2019 is now applicable to both closed loop heating and cooling circuits. Biocide is required in cooling and low temperature heating systems, and should be considered for higher temperature systems for added protection during downtime.

Highly Stable Biocide Solution

Serviceblend AIR contains a biocide designed to eliminate and prevent bacterial growth, helping maintain the efficiency, effectiveness, and life of the heating system. This biocide remains highly stable

Usage Information

This product is intended to be used as an additive for water within closed loop heating or cooling distribution systems. This should be dosed at 1L of Serviceblend AIR per 180L system volume.

Best practice for preparing and cleaning a system before commissioning can be found in BSRIA BG29/2012





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Fluids for Servicing & Maintenance

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Serviceblend BIO

Aqueous, broad spectrum biocide solution, ideally suited to shock-clean a system prior to filling with glycol.



Serviceblend INH

Multi-metal corrosion and scale inhibitor for closed-loop hot water and chilled water systems. This product has been approved under the NSF/CIAS product certification scheme.

serviceblend



Serviceblend OAT

Ultra-high performance multi metal corrosion inhibitor based on organic acid technology (OAT) for closed-loop hot water and chilled water systems. Suitable for industrial and domestic systems.



Serviceblend PRE

A pre-cleaner which loosens and dissolves commonly experienced deposits such as corrosion and scale, in preparation for flushing.



Serviceblend OLC

A blend of cleaning and dispersing agents with an effective bio dispersant. Cleans and passivates bare metal surfaces, preventing under deposit corrosion and prolonging system life.

What is Available?

- **Serviceblend AIR:** 2-in-1 biocide and inhibitor solution
- **Serviceblend BIO:** aqueous, broad spectrum biocide solution
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Product Sizes

- 1000 ltr
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- 20 ltr
- 10 ltr
- 1 ltr





thermablend

Fluids for Heat Pumps & Solar Thermal

Thermablend, for use in applications which include ground or air source heat pumps, solar thermal systems and underfloor heating.

What is Available?

- Thermablend-Lo (Non-hazardous)
- Thermablend-TX (Non-hazardous)
- Available pre-blended with Serviceblend PUR (deionised water) or neat
- Multiple dye colour options

Product Sizes

- 1000 ltr
- 220 ltr
- 20 ltr
- 25 ltr
- 10 ltr



thermablend-Lo

Description

Non-hazardous heat transfer fluid with market leading high thermal conductivity and low viscosity for heating systems operating up to 80°C. Thermablend-Lo contains a specially formulated biocide with increased thermal stability, and premium multi-metal corrosion and scale inhibitors that are NSF approved and endorsed by the Energy Saving Trust. Available neat or diluted.

Dilution & Freeze Point

Volume %	Freeze Point °C	Refractive Index
25%	-12.2	1.359
30%	-15.7	1.364
33%	-18.1	1.368
40%	-25	1.375
50%	-38.6	1.384
60%	-56.7	1.394

Uses

For ground and air source heat pumps and low temperature heating and cooling systems.

All of the above tests were performed by an independent laboratory, 2021.

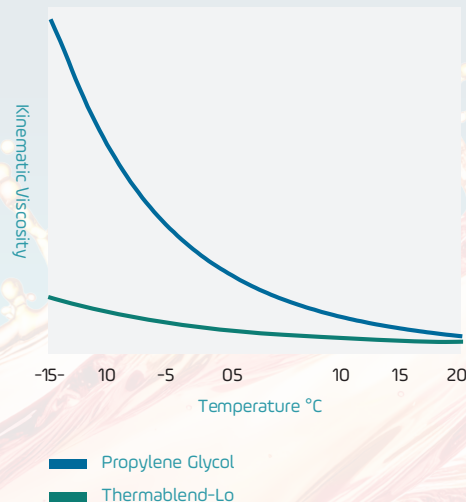
High Thermal Conductivity

0.2511 Wm⁻¹K⁻¹ measured undiluted at 23°C

Specific Heat Capacity

2324 Jkg⁻¹K⁻¹ measured undiluted at 23°C

Viscosity comparison





thermablend

Fluids for Heat Pumps & Solar Thermal

Thermablend, for use in applications which include ground or air source heat pumps, solar thermal systems and underfloor heating.

What is Available?

- Thermablend-Lo (Non-hazardous)
- Thermablend-TX (Non-hazardous)
- Available pre-blended with Serviceblend PUR (deionised water) or neat
- Multiple dye colour options

Product Sizes

- 1000 ltr
- 220 ltr
- 20 ltr
- 25 ltr
- 10 ltr



thermablend-TX

Description

Thermablend-TX is a multi-application heat transfer fluid. Its low parasitic pumping load results in reduced operational costs, and its additives remain highly stable over a broad temperature range for optimum performance. Thermablend-TX is non-hazardous and biodegradable.

Dilution & Freeze Point

Volume %	Freeze Point °C	Refractive Index
50%	-37.8	1.3850
40%	-25.1	1.3744
35%	-19.6	1.3695
30%	-14.9	1.3632

Uses

Suitable for solar thermal, biomass, combined heat and power, and heat pump systems where gases/air have been effectively vented from the closed loop system.

Should be diluted with de-mineralised water to achieve freeze protection required.

All of the above tests were performed by an independent laboratory, 2021.

High Thermal Conductivity

0.2518 $\text{Wm}^{-1}\text{K}^{-1}$ undiluted at 26°C
0.479 $\text{Wm}^{-1}\text{K}^{-1}$ diluted to 30% at 24.5°C
0.255 $\text{Wm}^{-1}\text{K}^{-1}$ undiluted at -0.6°C
0.436 $\text{Wm}^{-1}\text{K}^{-1}$ diluted to 30% at -1.4°C

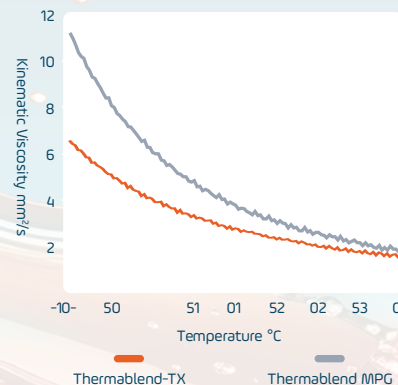
Specific Heat Capacity

2369 $\text{Jkg}^{-1}\text{K}^{-1}$ undiluted at 26°C
3433 $\text{Jkg}^{-1}\text{K}^{-1}$ diluted to 30% at 24.5°C
2346 $\text{Jkg}^{-1}\text{K}^{-1}$ undiluted at -0.6°C
3299 $\text{Jkg}^{-1}\text{K}^{-1}$ diluted to 30% at -1.4°C

Prandtl Number

24°C - 11.64
-1.4°C - 31.27

Low Viscosity





coolblend

Fluids for HVAC & Refrigeration

Glycol based secondary refrigerants for use throughout the HVAC sector, from refrigeration to process cooling, freezing to air conditioning.

What is Available?

- Coolblend IND (Ethylene Glycol)
- Coolblend MPG (Propylene Glycol)
- Coolblend-TX (Non-hazardous)
- Available pre-blended with Serviceblend PUR (deionised water) or neat
- Multiple dye colour options

Product Sizes

- 1000 ltr
- 220 ltr
- 20 ltr
- 25 ltr
- 10 ltr



Description

Ethylene glycol based secondary refrigerants for use in glycol systems throughout the HVAC sector from refrigeration to process cooling, freezing to air conditioning. Coolblend IND contains premium multi-metal corrosion and scale inhibitors that are NSF approved and endorsed by the Energy Saving Trust and is available neat or diluted.

Dilution & Freeze Point

Volume %	Freeze Point °C	Refractive Index
25%	-12.2	1.359
30%	-15.7	1.364
33%	-18.1	1.368
40%	-25	1.375
50%	-38.6	1.384
60%	-56.7	1.394

Uses

Suitable for use in industrial applications where toxicity is not an issue.

All of the above tests were performed by an independent laboratory, 2021.

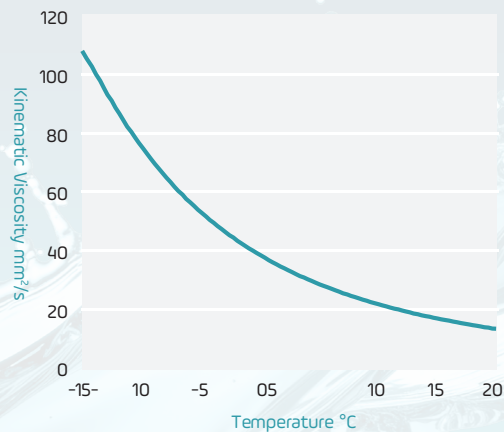
High Thermal Conductivity

0.2531 Wm⁻¹K⁻¹ measured undiluted at 23°C

Specific Heat Capacity

2319 Jkg⁻¹K⁻¹ measured undiluted at 23°C

Viscosity





coolblend

Fluids for HVAC & Refrigeration

Glycol based secondary refrigerants for use throughout the HVAC sector, from refrigeration to process cooling, freezing to air conditioning.

What is Available?

- Coolblend IND (Ethylene Glycol)
- Coolblend MPG (Propylene Glycol)
- Coolblend-TX (Non-hazardous)
- Available pre-blended with Serviceblend PUR (deionised water) or neat
- Multiple dye colour options

Product Sizes

- 1000 ltr
- 220 ltr
- 20 ltr
- 25 ltr
- 10 ltr



Description

Propylene Glycol based secondary refrigerant for use in glycol systems throughout the HVAC sector from refrigeration to process cooling, freezing to air conditioning.

Coolblend MPG contains premium multi-metal corrosion and scale inhibitors that are NSF approved and endorsed by the Energy Saving Trust and is available neat or diluted.

Dilution & Freeze Point

Volume %	Freeze Point °C	Refractive Index
25%	-9.2	1.362
30%	-11.7	1.367
33%	-14.4	1.369
40%	-21.7	1.378
50%	-32.8	1.388
60%	-51.1	1.398

Uses

Safe for closed-loop cooling systems within the food industry.

All of the above tests were performed by an independent laboratory, 2021.

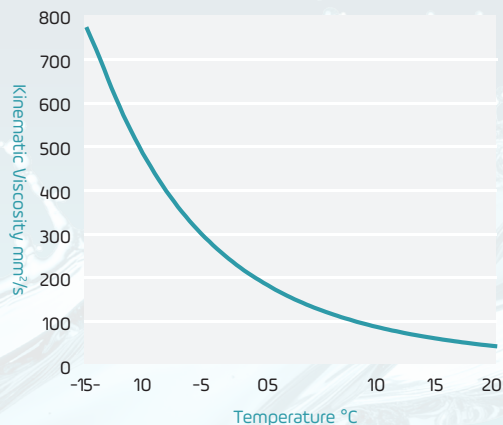
High Thermal Conductivity

0.2511 Wm⁻¹K⁻¹ measured undiluted at 23°C

Specific Heat Capacity

2324 Jkg⁻¹K⁻¹ measured undiluted at 23°C

Viscosity





coolblend

Fluids for HVAC & Refrigeration

Glycol based secondary refrigerants for use throughout the HVAC sector, from refrigeration to process cooling, freezing to air conditioning.

What is Available?

- Coolblend IND (Ethylene Glycol)
- Coolblend MPG (Propylene Glycol)
- Coolblend-TX (Non-hazardous)
- Available pre-blended with Serviceblend PUR (deionised water) or neat
- Multiple dye colour options

Product Sizes

- 1000 ltr
- 220 ltr
- 20 ltr
- 25 ltr
- 10 ltr



coolblend-TX

Description

Non-hazardous heat transfer fluid with market leading high thermal conductivity and low viscosity for reduced parasitic loads. This secondary refrigerant is for use in glycol systems throughout the HVAC sector from refrigeration to process cooling, freezing to air conditioning. Coolblend-TX contains premium multi-metal corrosion and scale inhibitors that are NSF approved and endorsed by the Energy Saving Trust and is available neat or diluted.

Dilution & Freeze Point

Volume %	Freeze Point °C	Refractive Index
25%	-12.2	1.359
30%	-15.7	1.364
33%	-18.1	1.368
40%	-25	1.375
50%	-38.6	1.384
60%	-56.7	1.394

Uses

Safe for incidental food contact and applications where low toxicity is a priority.

All of the above tests were performed by an independent laboratory, 2021.

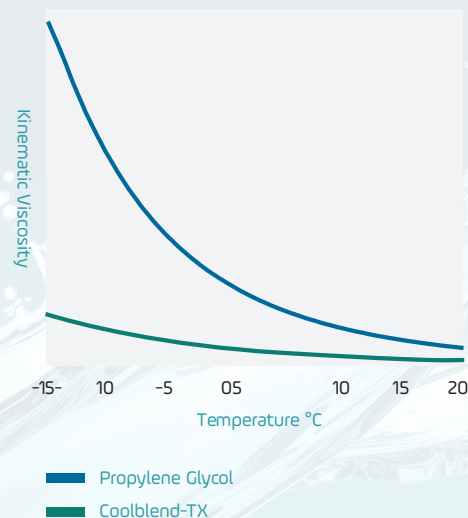
High Thermal Conductivity

0.2511 Wm⁻¹K⁻¹ measured undiluted at 23°C

Specific Heat Capacity

2324 Jkg⁻¹K⁻¹ measured undiluted at 23°C

Viscosity comparison





Molybdate Test Strips

Our Molybdate Test Strips offer a quick and reliable way to measure molybdate (MoO_4^{2-}) levels in water, with readings ranging from 0 to 350 ppm in clear increments of 0, 25, 50, 100, 150, 200, 250, 300, and 350 ppm.

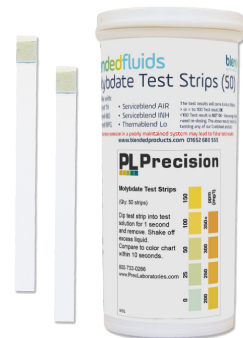
blendedfluids
by blended™

Molybdate is widely used in the water treatment industry as a corrosion inhibitor. It performs effectively in both chilled and hot water systems across a broad pH range, and it typically remains stable even in the presence of common biocides such as chlorine.

While effective corrosion control generally requires concentrations of 300 ppm or higher when molybdate is used on its own, this can be costly. That's why many molybdate-based treatment formulations include additional ingredients that improve performance and reduce the required molybdate dosage.

These test strips offer a cost-effective solution for monitoring molybdate levels. Always refer to your water treatment chemical supplier for the recommended molybdate concentration specific to your system.

Contact us on +44 (0)1652 680 555
for information or to purchase.





Case study: Busy Energy Ltd.

Busy Energy Ltd, a UK-based underfloor heating installation company, required a heat transfer fluid that would offer both functional performance and installation clarity. The solution needed to be non-hazardous, environmentally friendly, and easily visible within the pipework — helping installers confirm that the system had been properly filled and pressurised before handover.

Blended Products provided a tailored solution in the form of Thermablend-TX, a high-performance thermal transfer fluid formulated with a corrosion inhibitor package that meets ASTM D3306 and D1385 standards. For this application, Thermablend-TX was supplied in a bespoke red formulation, allowing clear visual confirmation that the fluid had been successfully distributed through the underfloor pipe network.

The use of a coloured fluid offered immediate benefits on site. Installers were able to confirm full system circulation and eliminate airlocks before closing the floor. This significantly reduced the risk of commissioning errors and avoided unnecessary rework. The visibility of the fluid also improved confidence during final checks and handovers.

In addition to supporting installation accuracy, Thermablend-TX provides long-term system protection. Its corrosion-inhibiting formulation helps prevent internal damage to metallic components within the pipework, reducing the risk of downtime or early system failure. As a non-hazardous fluid, it also supports safer handling and aligns with best practice in sustainable building services.

Clients benefit too. Systems filled with Thermablend-TX operate more efficiently over time, thanks to reduced scaling and consistent thermal conductivity. The result is lower energy consumption, longer equipment lifespan, and greater assurance for homeowners investing in underfloor heating technology.

This project highlights how customised heat transfer solutions can improve both installation quality and long-term system performance. Blended Products continues to support installers across the UK with tailored chemical formulations designed to meet technical specifications, environmental goals, and practical site requirements.

blended™



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