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Your Partner in Formulating Solutions

RECOFREEZE AL®50/50 **Aluminum Safe Low Temperature Heat Transfer Fluid**

RECOFREEZE AL® 50/50 is a premixed, ready to use, pH neutral heat transfer fluid specifically designed for use in aluminum boiler and heat exchanger systems. It is especially suited to combat acidic corrosion of aluminum and other system metals utilizing a proprietary combination of corrosion inhibitors in a blend of virgin propylene glycol and high quality de-ionized water. The additive system used is free of amine, borate, nitrate, nitrite, phosphate or silicate and formulated to provide corrosion protection to copper, solder, brass, steel, cast iron and aluminum components.

RECOFREEZE AL® 50/50 can be used in many commercial and industrial heat transfer applications, including primary and secondary heating and cooling hydronic systems, radiant tube heating or ice melt systems, solar panels and for a variety of de-icing, defrosting and de-humidifying applications. In addition to offering corrosion protection to metal components, it provides freeze and burst protection and is suitable for use in plastic pipes including PEX systems. Propylene glycol heat transfer fluids are typically used in applications where low acute oral toxicity is a requirement or where a potential exists for contact with food or potable water. Since **RECOFREEZE AL® 50/50** is already diluted, no further dilution with water is required prior to installation. The effective operating temperature for **RECOFREEZE AL® 50/50** is - 31°C to 150°C.

RECOFREEZE AL® 50/50 is a product that has:

- Appropriate heat transfer properties for the indicated applications
- Freeze protection to -31°C, burst protection to -60°C
- High boiling point
- Appropriate corrosion protection for copper, solder, brass, steel, cast iron and aluminum
- Low vapour pressure, meaning minimum make-up requirements
- Readily biodegradable compounds
- Is not recommended for heat transfer systems fitted with sacrificial anode.

The typical physical properties for **RECOFREEZE AL® 50/50** are found on the reverse side.

RECOFREEZE AL® 50/50 provides excellent value as a low temperature industrial heat transfer fluid. Along with this value, Recochem offers you and your customers continuing commitment to:

- Local Canadian made product
- Reliable supply
- Consistent high-quality product
- Unsurpassed technology
- Valuable technical service backup
- Education on safe use and handling

For more information on all of our Low Temperature Heat Transfer Fluids for your specific application contact your local Recochem representative.



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Table I - RECOFREEZE AL® 50/50 Physical and Chemical Properties

Test	Performance Value	Test Method
pH (as is)	7.0 – 8.5	ASTM D-1287
Specific Gravity (15.6 °C/60 °F)	1.025 min.	ASTM D-1122
Freeze Point	-31°C/-24°F	ASTM D-1177
Foam Volume (ml)	150 max.	ASTM D-1881
Break Time (sec)	5 max.	ASTM D-1881
Odour	Characteristic	
Colour	Yellow	
Total Glycol (Weight %)	46.0 min.	
Corrosion Inhibition Package / water (Weight %)	54.0 max.	
Chloride ppm	25 max.	ASTM D-3634

The performance and physical property data described for this product are typical results not sale specifications except where maximum or minimum is indicated.

Table II - ASTM Corrosion Performance Tests as run on RECOFREEZE AL®

ASTM D1384 Glassware Corrosion Test

Coupon Type	Test Result (mg/coupon)	ASTM Test Limit
Copper	0.1	10
Solder	0.9	30
Brass	0.3	10
Steel	1.5	10
Cast Iron	2.8	10
Aluminum	0.5	30

ASTM D4340, Heat rejecting Aluminum test (mg/cm²/wk)	0.1	1.0
ASTM D2809, Aluminum water pump cavitation / erosion test	9	8 min.

Notes:

- 1 Data on water is for tap water and data on propylene glycol is for Technical Grade Propylene Glycol.
- 2 All reported ASTM Corrosion Test Data was generated by Recochem's Engine Coolant Product Development Lab in Nisku, Alberta.

Notice:

Because use conditions and applicable laws may differ from one location to another and may change with time, customer is responsible for determining whether products and the information in this document is appropriate for customer's use and for ensuring that customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactment's. Recochem's warranty is limited to the claims of product meeting stated specifications. It is the responsibility of the end user to determine product suitability as recommended in the Owner's Manual and to follow engine manufacturer's instructions.