Coolflow LVF

Potassium Formate Antifreeze

For process cooling & AC systems

Performance Properties

Coolflow LVF has been especially formulated from Potassium Formate for use as a Non Toxic Secondary Refrigerant Antifreeze in Process Cooling, Refrigeration and Air Conditioning systems. It has much improved thermal efficiency in comparison with glycol based solutions.

Non Toxic:

Coolflow LVF has an LD50 toxicity rating (Oral Rat) of >=15,000 mg/kg of body weight (bw) = 'Relatively Harmless'. As confirmed by the Hodge & Sterner Scale.

Optimum Flow:

Coolflow LVF has improved heat transfer characteristics. Including lower Dynamic Viscosity and higher Specific Heat. For detailed comparison please refer to the Fluid Performance Chart - available upon request.

Protection:

Coolflow LVF contains synergistic corrosion inhibitors to protect metals commonly found in such systems. It has been tested in accordance with BS5117 and found to meet BS6580 and ASTM D1384 corrosion standards for mild & stainless steel, aluminium, copper, brass and cast iron. Zinc or galvanised components are not recommended for use with closed loop cooling or heating systems.

Coolflow LVF also contains scale and biological inhibitors to help prevent fouling - thus promoting long operational life and high thermal efficiency.

Application

As per BSRIA guide BG 29/2012 all pipe-work systems should be clean and free from biological contamination and debris prior to commissioning. To minimise corrosion air ingress should be minimized. A pressurised system is best.

Coolflow LVF is supplied as a Ready-To-Use Secondary Refrigerant Antifreeze, as per the table.

Physical Properties

Frost Protection
-50°C depending on concentration.

Density
1.2 - 1.4 g/cm³

pH
7.5 - 9.0 depending on inhibitors

Boiling Point
>100°C
For operating temperatures above 100°C, refer to Hydratech for technical advice.

Characteristics
a clear, low viscosity liquid. It is salty to the taste and has a non-pungent but characteristic aroma.

Biodegradability
Coolflow LVF mixtures are readily biodegradable (90% over ten days) and will not remain in the environment or bio-accumulate.

Container Sizes
Available in: 5, 10, 25, 205L drums & 1000L IBCs

Diluting Concentrate

When measuring the percentage concentration of Coolflow LVF in solution we recommend the use of a recently calibrated refractometer.

Coolflow LVF (strength)	Frost Protection °C	Dynamic Viscosity MPas (cP)	Thermal Conductivity (W/mk)	Refractive Index
LVF20	-20	1.8	0.56	1.36400
LVF30	-30	1.9	0.53	1.37300
LVF40	-40	2.2	0.52	1.38100
LVF50	-50	2.6	0.5	1.38500
LVF60	-60	2.9	0.48	1.39200

Fluid Management Services

To ensure inhibitor levels are being maintained and the system fluid is in good condition, we recommend periodic sampling and testing. Hydratech operate the Fluid Monitoring Program (FMP) service for all users of our products. For more information on the FMP please call or visit www.hydratech.co.uk.

Quality Assured

Coolflow LVF meets or exceeds the corrosion standards laid down in ASTM D-1384. Hydratech products are manufactured in accordance with ISO 9001: 2015 procedures.

Storage & Shelf Life

At least 3 years when stored in sealed containers, below 40°C and out of direct sunlight.

Health & Safety

Please refer to the associated Safety Data Sheet, which is available online via Login and/or by mail.

24/7 Technical Support

Technical support services and products to ensure ongoing system efficiency and protection.

tel. 01792 586800

sales@hydratech.co.uk

