

Glacier Coolant

Technical Data Sheet of LM-4ABG Glacier Coolant Product

**Focus on the anti-rust and anti-corrosion solutions of
industrial secondary refrigerant for 32 years**

Glacier Group



Product Name:LM-4ABG

Product: Professional food grade inhibited propylene glycol-based heat transfer fluid.

Application: Secondary heating and cooling

Freeze and burst protection of pipes

Various deicing, defrosting, and dehumidifying

Recommended Use Temperature Range: - 20°C to +100°C.

Description: LM-4ABG glacier coolant heat transfer fluid is industrially inhibited, low oral toxicity propylene glycol based heat transfer fluid. Carefully selected high-performance inhibitor ingredients and high-quality glycol make this a cost-effective, and efficient product for applications where freeze protection is needed.

Its high thermal stability and low viscosity also ensure efficient heat transfer and reduced energy consumption. LM-4ABG glacier coolant heat transfer fluid is suitable for use in HVAC, geothermal, solar and other applications where reliable, long life, low oral toxicity heat transfer fluid is required. In addition, we can provide customized depending on your system specifications.

Table 1. Typical product properties¹ of LM-4ABG Glacier Coolant Heat Transfer Fluid

Typical Properties 95.6% Wt	
Colour	Colourless
Odor	Little or none
pH (50%)	8.2
Density (20°C, g/cm ³)	1048
Boiling point (°C)	161

Typical properties, not to be construed as specifications.



Table 2. Typical Freezing Point and Boiling Points

Wt (%)	Vol (%)	Freezing point (°C)	Boiling point (°C)
0	0	0	100
5	4.8	-1.6	100
10	9.6	-3.3	100
15	14.5	-5.1	100
20	19.4	-7.1	100.6
25	24.4	-9.6	101.1
30	29.4	-12.7	102.2
35	34.4	-17.3	102.8
40	39.6	-22.1	103.9
45	44.7	-27.9	104.4
50	-49.9	-36.6	105.6
55	55	-49.2	106.1
60	60		107.2
65	65		108.3
70	60		110
75	75		113.9
80	80		118.3
85	85		125
90	90		132.2
95.6	95.6		161



Table 3. Density (kg/m³)

Propylene glycol percent by weight				
Temp, °C	30%	40%	50%	60%
-25			1060	
-20			1058	1069
-15		1042	1057	1063
-10		1041	1055	1057
-5	1030	1040	1053	1054
0	1029	1039	1050	1051
5	1027	1038	1047	1048
10	1025	1037	1044	1045
20	1021	1033	1040	1037
30	1015	1030	1035	1030
40	1011	1027	1030	1023
50	1007	1024	1025	1016
60	1003	1021	1020	1009
70	999	1018	1015	1002
80	995	1015	1010	995
90	991	1012	1005	988

Table 4. Specific Heat (kJ/kg)

Propylene glycol percent by weight				
Temp, °C	30%	40%	50%	60%
-25			2.899	
-20			3.001	2.620
-15		3.276	3.060	2.679
-10		3.397	3.114	2.729
-5	3.548	3.460	3.165	2.776
0	3.605	3.503	3.216	2.822
5	3.642	3.543	3.261	2.866
10	3.668	3.581	3.305	2.907
20	3.707	3.645	3.379	2.985
30	3.744	3.697	3.447	3.057
40	3.776	3.739	3.499	3.117
50	3.821	3.779	3.546	3.172
60	3.871	3.812	3.584	3.221
70	3.902	3.854	3.626	3.269
80	3.936	3.878	3.665	3.316
90	3.962	3.883	3.703	3.360



Table 5. Thermal conductivity (W/mK)

Propylene glycol percent by weight				
Temp, °C	30%	40%	50%	60%
-25			0.3473	
-20			0.3490	0.3145
-15		0.3841	0.3517	0.3169
-10		0.3885	0.3544	0.3193
-5	0.4301	0.3930	0.3574	0.3214
0	0.4331	0.3974	0.3596	0.3234
5	0.4383	0.4005	0.3621	0.3254
10	0.4435	0.4036	0.3646	0.3273
20	0.4562	0.4117	0.3696	0.3313
30	0.4686	0.4204	0.3746	0.3353
40	0.4806	0.4284	0.3796	0.3393
50	0.4926	0.4364	0.3846	0.3433
60	0.5046	0.4444	0.3896	0.3473
70	0.5166	0.4524	0.3946	0.3513
80	0.5286	0.4604	0.3996	0.3553
90	0.5406	0.4684	0.4046	0.3593

Table 6. Viscosity (mPa sec)

Propylene glycol percent by weigh				
Temp, °C	30%	40%	50%	60%
-25			101.70	
-20			64.50	118.62
-15		28.60	46.81	94.49
-10		20.10	29.12	50.35
-5	9.04	15.63	22.01	37.80
0	7.01	11.15	14.89	25.24
5	5.72	8.84	11.87	19.74
10	4.42	6.53	8.85	14.23
20	3.23	4.47	5.79	8.67
30	2.13	3.09	4.38	5.46
40	1.65	2.19	3.06	4.19
50	1.22	1.58	2.15	3.01
60	1.01	1.21	1.64	2.11
70	0.88	1.03	1.27	1.69
80	0.62	0.86	1.06	1.24
90	0.53	0.67	0.89	1.07



Chart 1 - Density (kg/m^3) at 30%, 40% , 50% and 60%

Density at 30%, 40%, 50% and 60% Dilution

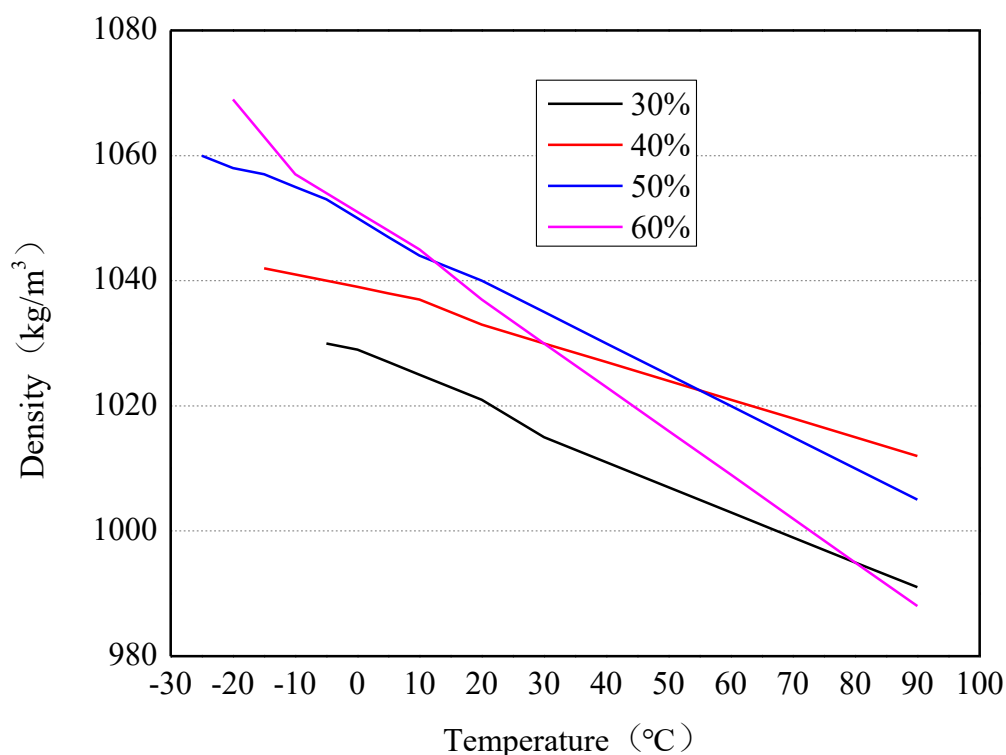


Chart 2 - Specific Heat (kJ/kg K) at 30%, 40% , 50% and 60%

Specific Heat at 30%, 40%, 50% and 60% Dilution

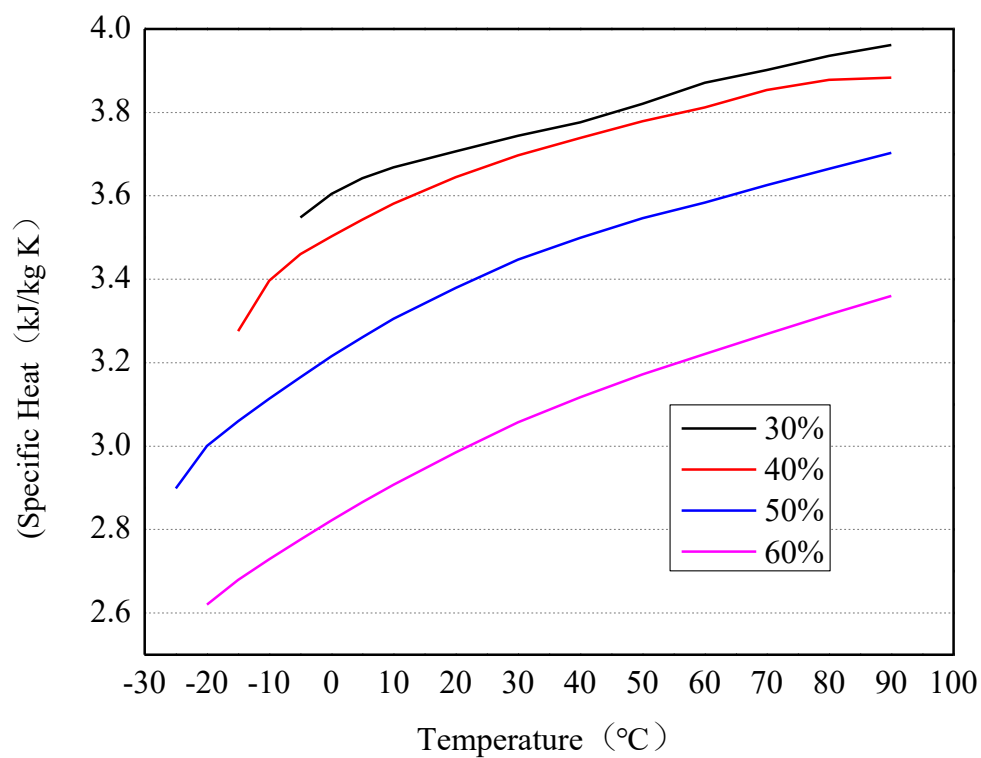


Chart 3 - Thermal Conductivity (W/mK) at 30%, 40% , 50% and 60% Thermal
Conductivity at 30%, 40%, 50% and 60% Dilution

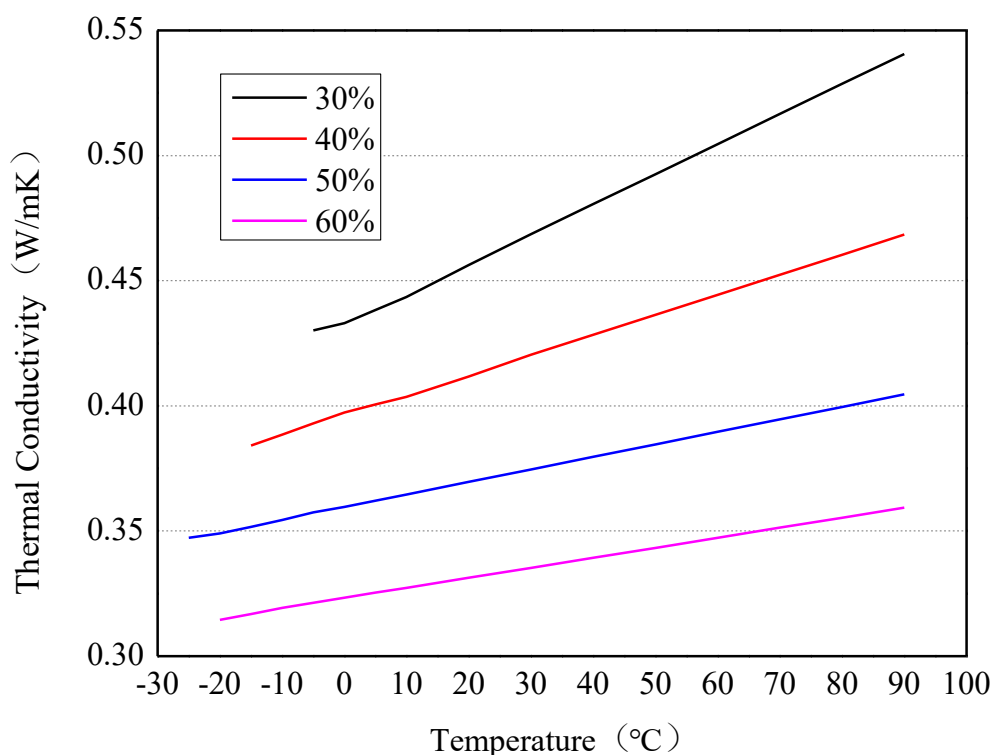
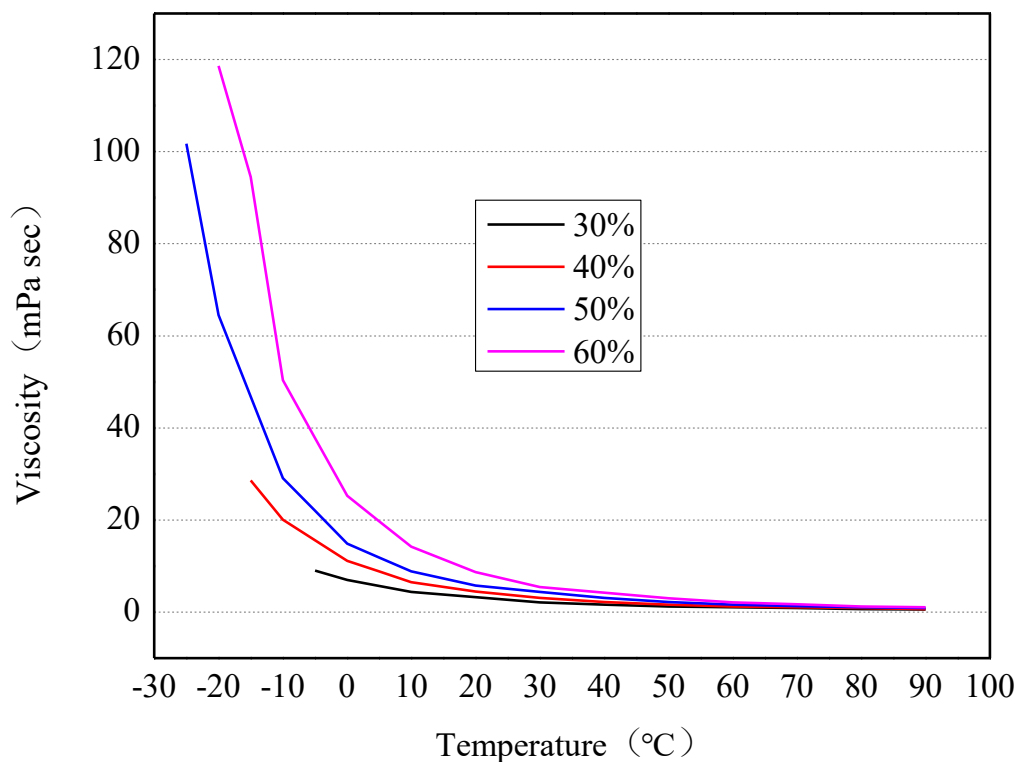


Chart 4 - Fluid Viscosity (mPa) at 30%, 40% , 50% and 60%

Viscosity at 30%, 40%, 50% and 60% Dilution





Conditions of Sale & Usage (Standard Disclaimer)

This product should not be used for any purpose or in any manner contrary to the labelling, SDS, or Technical Data Sheet, unless authorised to do so under appropriate legislation. By purchasing and using this product the purchaser assumes responsibility for any and all results that may occur and shall not hold the manufacturer liable for any loss or injury however occurring.

