



TECHNICAL DATA SHEET

Product Name: GLY-PRO™ MG HTF

PRODUCT: Professional industrially inhibited ethylene glycol based heat transfer fluid

APPLICATION: Closed Loop
Secondary heating and cooling
Freeze and burst protection of pipes
Various deicing, defrosting, and dehumidifying

RECOMMENDED USE TEMPERATURE RANGE: - 50°C to +160°C

DESCRIPTION: GLY-PRO™ MG HTF is a high-performance ethylene glycol solution, renowned for its exceptional thermal conductivity and freeze protection properties. It is ideal for a wide range of industrial applications, including HVAC systems, and industrial machinery. GLY-PRO™ MG is formulated to provide optimal performance, minimize corrosion, and extend the life of critical equipment.

Its high thermal stability and low viscosity also ensure efficient heat transfer and reduced energy consumption. GLY-PRO™ MG HTF is suitable for use in HVAC, geothermal, solar and other applications where reliable, long life heat transfer fluid is required.

Table 1. Typical product properties¹ of GLY-PRO™ MG Heat Transfer Fluid

Typical Properties Concentrate		Typical Properties 30%	
Colour	Clear to Yellow	Colour	Clear to Yellow
pH	9.3	pH	8.8
RA (mL)	8	RA (mL)	2.5
Density (g/ml)	1.115	Density (g/ml)	1.035

¹ General properties, not definitive specifications

Table 2. Freeze and Burst Protection

Volume %	Freeze Protection °C	Burst Protection °C
10	-4.0	-7.0
20	-9.0	-13.0
30	-16.0	-23.0
35	-20.0	-29.0
40	-24.0	-35.0
45	-29.0	-42.0
50	-34.0	-48.0
60	-45.0	-59.0

Table 3. Electrical Conductivity

Weight %	Temp °C	Electrical Conductivity (µS/cm)
0	25	1.2
30	25	3222
40	25	3200
50	25	2960
60	25	2600
100	25	911

Table 4. Typical Freezing Point and Boiling Points

Freezing Point °C	wt %	Vol %	Boiling Point °C @ 0.96 Barr
0	0	0	100
-1.4	5	4.4	101
-3.2	10	8.9	101
-5.4	15	13.6	102
-7.8	20	18.1	102
-8.4	21	19.2	102
-8.9	22	20.1	102
-9.5	23	21	103
-10.2	24	22	103
-10.7	25	22.9	103
-11.4	26	23.9	103
-12	27	24.8	103
-12.6	28	25.8	104
-13.3	29	26.7	104
-14.1	30	27.7	104
-14.8	31	28.7	104
-15.4	32	29.6	104
-16.2	33	30.6	104
-17	34	31.6	104
-17.9	35	32.6	105

Freezing Point °C	wt %	Vol %	Boiling Point °C @ 0.96 Barr
0	0	0	100
-18.6	36	33.5	105
-19.4	37	34.5	105
-20.3	38	35.5	105
-21.3	39	36.5	105
-22.3	40	37.5	106
-23.2	41	38.5	106
-24.3	42	39.5	106
-25.3	43	40.5	106
-26.4	44	41.5	106
-27.5	45	42.5	107
-28.8	46	43.5	107
-29.8	47	44.5	107
-31.1	48	45.5	107
-32.6	49	46.6	107
-33.8	50	47.6	107
-35.1	51	48.6	107
-36.4	52	49.6	107
-37.9	53	50.6	108
-39.3	54	51.6	108
-41.1	55	52.7	108
-42.6	56	53.7	108
-44.2	57	54.7	109
-45.6	58	55.7	109
-47.1	59	56.8	109
-48.3	60	57.8	110
-	65	62.8	113
-	70	68.3	117
-	75	73.6	120
-	80	78.9	124
-	85	84.3	134
-	90	89.7	141
-	95	95	158

Table 5. Density (kg/m³)

°C	30%	40%	50%	60%
-50	-	-	-	-
-45	-	-	-	-
-40	-	-	-	-
-35	-	-	-	-
-30	-	-	1109.9	1125.8
-25	-	1090.9	1107.9	1123.6
-20	-	1089.0	1105.8	1121.3
-15	1069.2	1087.0	1103.6	1119.0
-10	1067.3	1084.9	1101.3	1116.6
-5	1065.3	1082.8	1099.0	1114.1
0	1063.3	1080.5	1096.6	1111.5
5	1061.2	1078.2	1094.1	1108.9
10	1059.0	1075.8	1091.5	1106.1
15	1056.8	1073.4	1088.9	1103.3
20	1054.4	1070.8	1086.2	1100.5
25	1052.0	1068.2	1083.4	1097.5
30	1049.5	1065.5	1080.5	1094.5
35	1046.9	1062.7	1077.6	1091.4
40	1044.2	1059.9	1074.6	1088.3
45	1041.5	1057.0	1071.5	1085.0
50	1038.7	1054.0	1068.3	1081.7
55	1035.8	1050.9	1065.0	1078.3
60	1032.8	1047.7	1061.7	1074.9
65	1029.8	1044.5	1058.3	1071.3
70	1026.6	1041.2	1054.8	1067.7
75	1023.4	1037.8	1051.3	1064.0
80	1020.1	1034.3	1047.7	1060.3
85	1016.8	1030.7	1044.0	1056.4
90	1013.3	1027.1	1040.2	1052.5
95	1009.8	1023.4	1036.3	1048.6
100	1006.2	1019.6	1032.4	1044.5
105	1002.5	1015.8	1028.4	1040.4
110	998.7	1011.8	1024.3	1036.2
115	994.9	1007.8	1020.1	1031.9
120	991.0	1003.7	1015.9	1027.6
125	987.0	999.6	1011.6	1023.1
130	982.9	995.3	1007.2	1018.6
135	978.7	991.0	1002.7	1014.1
140	974.5	986.6	998.2	1009.4
145	970.2	982.1	993.6	1004.7
150	965.8	977.5	988.9	999.9
155	961.3	972.9	984.1	995.0
160	956.8	968.2	979.3	990.1

Table 6. Specific Heat (kJ/kg)

°C	30%	40%	50%	60%
-50	-	-	-	-
-45	-	-	-	-
-40	-	-	-	-
-35	-	-	-	-
-30	-	-	3.050	2.818
-25	-	3.289	3.069	2.840
-20	-	3.306	3.089	2.862
-15	3.527	3.323	3.109	2.885
-10	3.542	3.341	3.129	2.907
-5	3.556	3.358	3.149	2.929
0	3.571	3.375	3.168	2.952
5	3.585	3.392	3.188	2.974
10	3.600	3.409	3.208	2.997
15	3.614	3.426	3.228	3.019
20	3.629	3.443	3.247	3.041
25	3.643	3.461	3.267	3.064
30	3.658	3.478	3.287	3.086
35	3.672	3.495	3.307	3.108
40	3.686	3.512	3.326	3.131
45	3.701	3.529	3.346	3.153
50	3.715	3.546	3.366	3.175
55	3.730	3.563	3.386	3.198
60	3.744	3.581	3.406	3.220
65	3.759	3.598	3.425	3.242
70	3.773	3.615	3.445	3.265
75	3.788	3.632	3.465	3.287
80	3.802	3.649	3.485	3.309
85	3.817	3.666	3.504	3.332
90	3.831	3.683	3.524	3.354
95	3.846	3.701	3.544	3.376
100	3.860	3.718	3.564	3.399
105	3.875	3.735	3.583	3.421
110	3.889	3.752	3.603	3.443
115	3.903	3.769	3.623	3.466
120	3.918	3.786	3.643	3.488
125	3.932	3.803	3.662	3.510
130	3.947	3.821	3.682	3.533
135	3.961	3.838	3.702	3.555
140	3.976	3.855	3.722	3.577
145	3.990	3.872	3.742	3.600
150	4.005	3.889	3.761	3.622
155	4.019	3.906	3.781	3.644
160	4.034	3.923	3.801	3.667

Table 7. Thermal conductivity (W/mK)

°C	30%	40%	50%	60%
-50	-	-	-	-
-45	-	-	-	-
-40	-	-	-	-
-35	-	-	-	-
-30	-	-	0.328	0.303
-25	-	0.361	0.332	0.306
-20	-	0.366	0.336	0.31
-15	0.405	0.371	0.340	0.313
-10	0.411	0.376	0.344	0.316
-5	0.417	0.381	0.348	0.319
0	0.423	0.386	0.352	0.322
5	0.429	0.391	0.356	0.325
10	0.435	0.395	0.360	0.328
15	0.440	0.400	0.363	0.331
20	0.445	0.404	0.367	0.334
25	0.450	0.408	0.370	0.336
30	0.455	0.412	0.373	0.338
35	0.459	0.415	0.376	0.341
40	0.463	0.419	0.378	0.343
45	0.467	0.422	0.381	0.345
50	0.471	0.425	0.383	0.347
55	0.474	0.427	0.385	0.348
60	0.477	0.430	0.387	0.35
65	0.480	0.432	0.389	0.351
70	0.483	0.434	0.391	0.352
75	0.485	0.436	0.392	0.354
80	0.487	0.438	0.394	0.355
85	0.489	0.439	0.395	0.355
90	0.490	0.440	0.396	0.356
95	0.491	0.441	0.396	0.357
100	0.493	0.442	0.397	0.357
105	0.493	0.443	0.398	0.358
110	0.494	0.443	0.398	0.358
115	0.495	0.444	0.398	0.358
120	0.495	0.444	0.398	0.358
125	0.495	0.444	0.398	0.358
130	0.495	0.444	0.398	0.358
135	0.495	0.444	0.398	0.357
140	0.494	0.443	0.397	0.357
145	0.494	0.443	0.397	0.356
150	0.493	0.442	0.396	0.356
155	0.492	0.441	0.395	0.355
160	0.491	0.440	0.395	0.354

Table 8. Viscosity (mPa sec)

°C	30%	40%	50%	60%
-50	-	-	-	-
-45	-	-	-	-
-40	-	-	-	-
-35	-	-	-	-
-30	-	-	43.98	65.25
-25	-	22.01	30.50	46.75
-20	-	15.75	22.07	34.28
-15	7.77	11.74	16.53	25.69
-10	6.19	9.06	12.74	19.62
-5	5.03	7.18	10.05	15.25
0	4.15	5.83	8.09	12.05
5	3.48	4.82	6.63	9.66
10	2.95	4.04	5.50	7.85
15	2.53	3.44	4.63	6.46
20	2.20	2.96	3.94	5.38
25	1.92	2.57	3.39	4.52
30	1.69	2.26	2.94	3.84
35	1.50	1.99	2.56	3.29
40	1.34	1.77	2.26	2.84
45	1.21	1.59	2.00	2.47
50	1.09	1.43	1.78	2.16
55	0.99	1.29	1.59	1.91
60	0.90	1.17	1.43	1.69
65	0.83	1.06	1.29	1.51
70	0.76	0.97	1.17	1.35
75	0.70	0.89	1.07	1.22
80	0.65	0.82	0.98	1.10
85	0.60	0.76	0.89	1.00
90	0.56	0.70	0.82	0.92
95	0.52	0.65	0.76	0.84
100	0.49	0.60	0.70	0.77
105	0.46	0.56	0.65	0.71
110	0.43	0.53	0.60	0.66
115	0.41	0.49	0.56	0.61
120	0.38	0.46	0.53	0.57
125	0.36	0.43	0.49	0.53
130	0.35	0.41	0.46	0.50
135	0.33	0.38	0.43	0.46
140	0.31	0.36	0.41	0.44
145	0.30	0.34	0.38	0.41
150	0.28	0.32	0.36	0.39
155	0.27	0.31	0.34	0.37
160	0.26	0.29	0.32	0.35

Table 9. Vapour pressure (kPa)

°C	30%	40%	50%	60%
50	12.0	11.4	10.8	10.1
55	14.6	13.8	12.9	11.9
60	18.5	17.5	16.4	15.1
65	22.1	20.7	19.1	17.2
70	27.6	25.8	23.9	21.6
75	34.2	32.1	29.7	26.9
80	42.0	39.5	36.6	33.2
85	51.3	48.3	44.8	40.7
90	62.3	58.7	54.4	49.6
95	75.2	70.8	65.8	60.0
100	90.2	85.0	79.0	72.1
105	107.6	101.4	94.3	86.2
110	127.7	120.4	111.9	102.4
115	150.7	142.1	132.2	121.1
120	177.0	166.9	155.3	142.4
125	206.9	195.2	181.6	166.6
130	240.8	227.2	211.4	194.0
135	279.1	263.3	245.0	224.9
140	322.1	303.8	282.7	259.6
145	370.3	349.2	324.9	298.5
150	424.1	399.9	372.0	341.8
155	484.0	456.3	424.3	389.9
160	550.4	518.7	482.3	443.2

Chart 1 - Density (kg/m³) at 30%, 40% and 50%

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

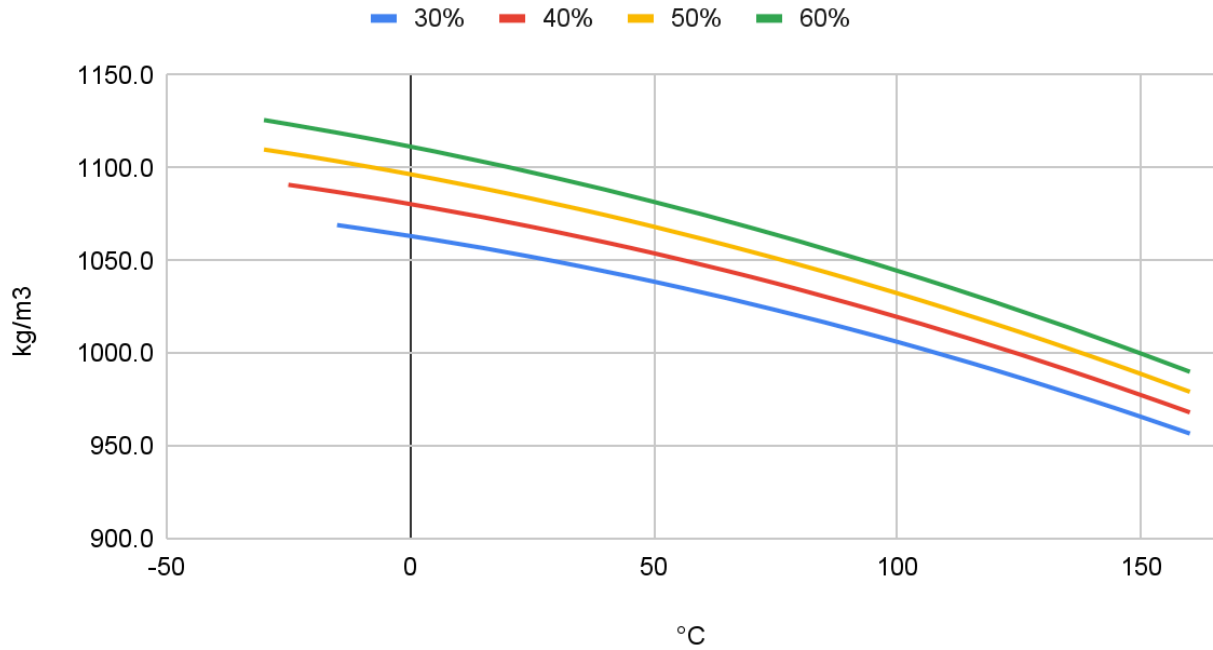


Chart 2 - Specific Heat (kJ/kg K) at 30%, 40% and 50%

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

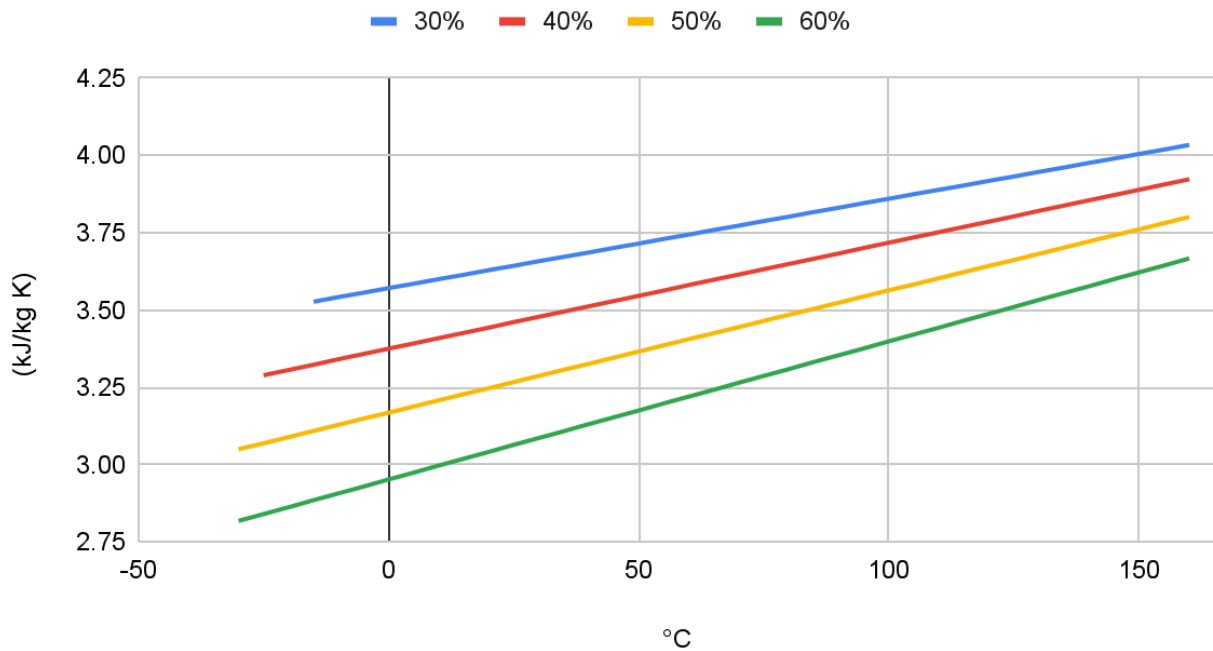


Chart 3 - Thermal Conductivity (W/mK) at 30%, 40% and 50%

Thermal Conductivity at 30%, 40%, 50% and 60% Dilution

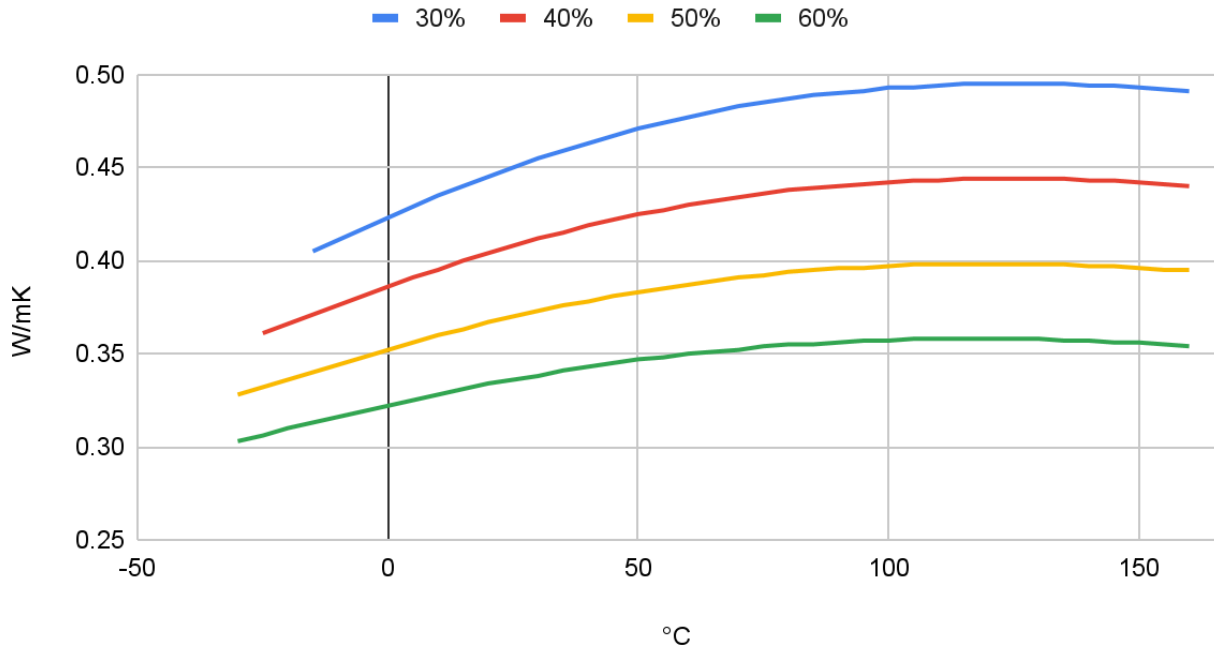


Chart 4 - Fluid Viscosity (mPa) at 30%, 40% and 50%

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

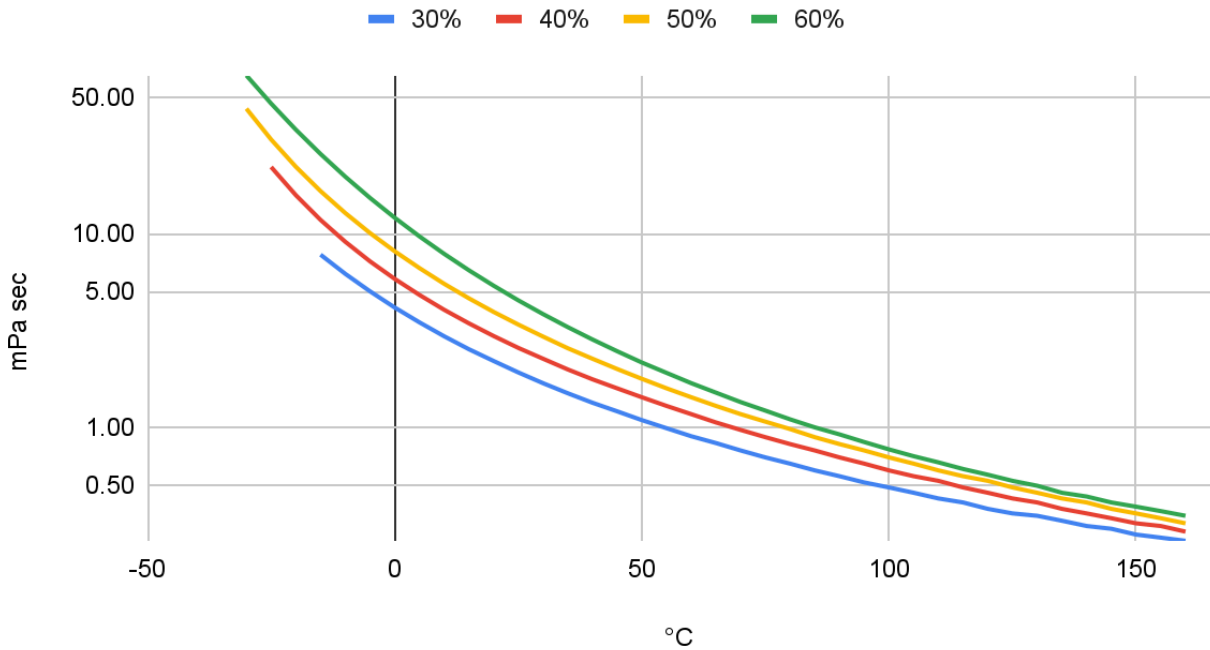
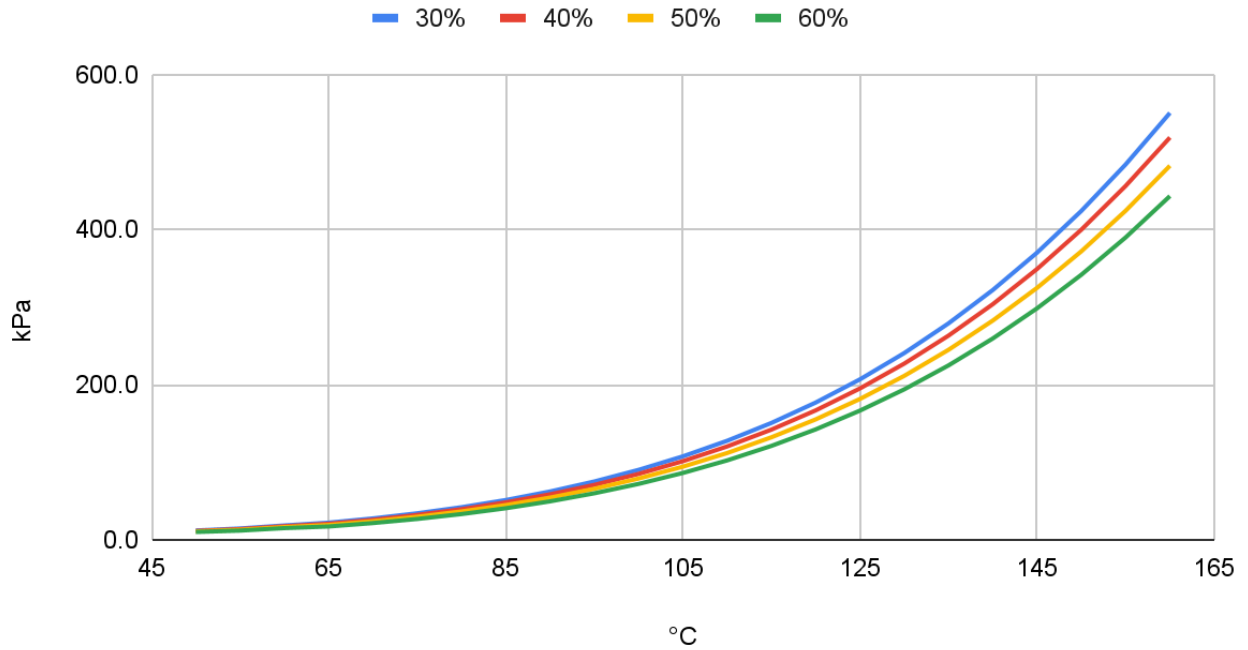


Chart 5 - Vapour Pressure (kPa) at 30%, 40% and 50%

Vapour Pressure 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.