



TECHNICAL DATA SHEET

Product Name: GLY-PRO™ XD HTF

PRODUCT: Professional industrially 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: - 50°C to +160°C

DESCRIPTION: GLY-PRO™ XD HTF is industrially inhibited, low oral toxicity propylene glycol based heat transfer fluid. Robust inhibitor ingredients make this ideal for industrial applications where hard water dilution may be required..

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

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

Typical Properties Concentrate		Typical Properties 30%	
Colour	Clear to Yellow	Colour	Clear to Yellow
pH	9.7	pH	9.1
RA (mL)	7.5	RA (mL)	2.5
Density (g/ml)	1.040	Density (g/ml)	1.026

¹ General properties, not definitive specifications

Table 2. Freeze and Burst Protection

°C	Volume % Freeze Protection	Volume % Burst Protection
-5	15.6	10.8
-10	25.8	17.3
-15	34.0	22.6
-20	40.5	26.9
-25	45.6	30.2
-30	49.7	32.7
-35	53.1	34.5
-40	56.2	35.7
-45	59.2	36.3
-50	62.5	36.6

Table 3. Electrical Conductivity

Weight %	Temp °C	Electrical Conductivity (mhos/cm)
0	25	1.2
30	25	2370
40	25	2220
50	25	1982
60	25	1564
100	25	220

Table 4. Typical Freezing Point and Boiling Points

Typical Freezing Point and Boiling Points					
Freezing Point °C	wt %	Vol %	Boiling Point °C @ 0.96 Barr	Degree Brix	Refractive Index 22°C
0	0	0	100	0	1.3328
-1.6	5	4.8	100	4.8	1.3383
-3.3	10	9.6	100	8.4	1.3438
-5.1	15	14.5	100	12.9	1.3495
-7.1	20	19.4	101	15.4	1.3555
-7.6	21	20.4	101	16	1.3567
-8	22	21.4	101	16.7	1.3579
-8.6	23	22.4	101	17.4	1.3591
-9.1	24	23.4	101	18.4	1.3603
-9.6	25	24.4	101	19	1.3615
-10.2	26	25.3	101	19.6	1.3627
-10.8	27	26.4	101	20.2	1.3639
-11.4	28	27.4	102	20.8	1.3651
-12	29	28.4	102	21.4	1.3663
-12.7	30	29.4	102	22	1.3675
-13.4	31	30.4	102	22.7	1.3687
-14.1	32	31.4	102	23.6	1.3698
-14.8	33	32.4	102	24.4	1.3710
-15.6	34	33.5	102	25.3	1.3621
-16.4	35	34.4	103	26.1	1.3733
-17.3	36	35.5	103	26.9	1.3744
-18.2	37	36.5	103	27.5	1.3756
-19.1	38	37.5	103	28	1.3767

Typical Freezing Point and Boiling Points					
Freezing Point °C	wt %	Vol %	Boiling Point °C @ 0.96 Barr	Degree Brix	Refractive Index 22°C
0	0	0	100	0	1.3328
-20.1	39	38.5	103	28.5	1.3779
-21.1	40	39.6	104	29.1	1.3790
-22.1	41	40.6	104	29.6	1.3802
-23.2	42	41.6	104	30.2	1.3813
-24.3	43	42.6	104	30.7	1.3825
-25.5	44	43.7	104	31.3	1.3836
-26.7	45	44.7	104	31.8	1.3847
-27.9	46	45.7	104	32.4	1.3858
-29.3	47	46.8	104	33	1.3870
-30.6	48	47.8	105	33.5	1.3881
-32.1	49	48.9	105	34.1	1.3892
-33.5	50	49.9	106	34.7	1.3903
-35	51	50.9	106	35.5	1.3914
-36.6	52	51.9	106	35.9	1.3924
-38.2	53	53	106	36.6	1.3935
-39.8	54	54	106	37.2	1.3945
-41.6	55	55	106	38	1.3956
-43.3	56	56	106	38.5	1.3966
-45.2	57	57	107	39	1.3977
-47.1	58	58	107	39.6	1.3987
-49	59	59	107	40.1	1.3998
-51.1	60	60	107	40.6	1.4008
-	65	65	108	42.1	1.4058
-	70	70	110	44.1	1.4104
-	75	75	114	46.1	1.4150
-	80	80	118	48	1.4193
-	85	85	125	50	1.4235
-	90	90	132	51.4	1.4275
-	95	95	154	52.8	1.4315

Table 5. Density (kg/m³)

°C	30%	40%	50%	60%
-50				
-45				
-40				
-35				1094.72
-30			1081.9	1092.82
-25			1080.2	1090.82
-20		1066.6	1078.4	1088.72
-15		1065.0	1076.5	1086.52
-10	1050.7	1063.3	1074.5	1084.22
-5	1049.2	1061.5	1072.4	1081.82
0	1047.5	1059.5	1070.1	1079.32
5	1045.7	1057.5	1067.8	1076.62
10	1043.8	1055.3	1065.3	1073.92
15	1041.8	1053.0	1062.7	1071.12
20	1039.6	1050.5	1060.0	1068.12
25	1037.4	1048.0	1057.2	1065.02
30	1035.0	1045.3	1054.3	1061.92
35	1032.5	1042.6	1051.3	1058.62
40	1029.8	1039.7	1048.1	1055.22
45	1027.1	1036.7	1044.9	1051.72
50	1024.2	1033.5	1041.5	1048.12
55	1021.2	1030.3	1038.0	1044.42
60	1018.1	1026.9	1034.5	1040.62
65	1014.8	1023.5	1030.8	1036.72
70	1011.5	1019.9	1026.9	1032.72
75	1008.0	1016.2	1023.0	1028.52
80	1004.4	1012.3	1019.0	1024.32
85	1000.7	1008.4	1014.8	1020.02
90	996.8	1004.3	1010.5	1015.52
95	992.9	1000.1	1006.2	1010.92
100	988.8	995.8	1001.7	1006.32
105	984.6	991.4	997.1	1001.52
110	980.2	986.9	992.3	996.62
115	975.8	982.2	987.5	991.62
120	971.2	977.5	982.6	986.52
125	966.5	972.6	977.5	981.32
130	961.7	967.6	972.3	976.02
135	956.8	962.5	967.1	970.62
140	951.8	957.2	961.7	965.12
145	946.6	951.9	956.2	959.52
150	941.3	946.4	950.5	953.72
155	935.9	940.8	944.8	947.92
160	930.3	935.1	939.0	941.92

Table 6. Specific Heat (kJ/kg)

°C	30%	40%	50%	60%
-50				
-45				
-40				
-35				2.920
-30			3.226	2.947
-25			3.249	2.973
-20		3.515	3.271	3.000
-15		3.533	3.294	3.027
-10	3.759	3.552	3.316	3.054
-5	3.774	3.570	3.339	3.081
0	3.788	3.589	3.362	3.107
5	3.802	3.607	3.384	3.134
10	3.817	3.626	3.407	3.161
15	3.831	3.644	3.430	3.188
20	3.845	3.662	3.452	3.215
25	3.860	3.681	3.475	3.241
30	3.874	3.699	3.497	3.268
35	3.888	3.718	3.520	3.295
40	3.902	3.736	3.543	3.322
45	3.917	3.755	3.565	3.348
50	3.931	3.773	3.588	3.375
55	3.945	3.792	3.611	3.402
60	3.960	3.810	3.633	3.429
65	3.974	3.829	3.656	3.456
70	3.988	3.847	3.678	3.482
75	4.003	3.866	3.701	3.509
80	4.017	3.884	3.724	3.536
85	4.031	3.902	3.746	3.563
90	4.045	3.921	3.769	3.590
95	4.060	3.939	3.792	3.616
100	4.074	3.958	3.814	3.643
105	4.088	3.976	3.837	3.670
110	4.103	3.995	3.860	3.697
115	4.117	4.013	3.882	3.724
120	4.131	4.032	3.905	3.750
125	4.146	4.050	3.927	3.777
130	4.160	4.069	3.950	3.804
135	4.174	4.087	3.973	3.831
140	4.188	4.106	3.995	3.858
145	4.203	4.124	4.018	3.884
150	4.217	4.143	4.041	3.911
155	4.231	4.161	4.063	3.938
160	4.246	4.179	4.086	3.965

Table 7. Thermal conductivity (W/mK)

°C	30%	40%	50%	60%
-50				
-45				
-40				
-35				0.299
-30			0.332	0.302
-25			0.336	0.305
-20		0.376	0.341	0.308
-15		0.381	0.345	0.312
-10	0.427	0.386	0.349	0.315
-5	0.433	0.391	0.353	0.318
0	0.439	0.396	0.357	0.321
5	0.445	0.401	0.361	0.324
10	0.451	0.406	0.364	0.327
15	0.456	0.410	0.368	0.329
20	0.461	0.414	0.371	0.332
25	0.466	0.418	0.374	0.334
30	0.471	0.422	0.377	0.337
35	0.475	0.426	0.380	0.339
40	0.480	0.429	0.383	0.341
45	0.483	0.432	0.385	0.343
50	0.487	0.435	0.388	0.344
55	0.490	0.438	0.390	0.346
60	0.493	0.440	0.392	0.347
65	0.496	0.443	0.393	0.349
70	0.499	0.445	0.395	0.350
75	0.501	0.446	0.396	0.351
80	0.503	0.448	0.397	0.351
85	0.504	0.449	0.398	0.352
90	0.506	0.450	0.399	0.353
95	0.507	0.451	0.400	0.353
100	0.508	0.452	0.400	0.353
105	0.509	0.453	0.401	0.353
110	0.510	0.453	0.401	0.353
115	0.510	0.453	0.401	0.353
120	0.510	0.453	0.401	0.353
125	0.510	0.453	0.400	0.353
130	0.510	0.453	0.400	0.352
135	0.510	0.452	0.400	0.352
140	0.509	0.452	0.399	0.351
145	0.508	0.451	0.398	0.350
150	0.508	0.450	0.397	0.350
155	0.507	0.449	0.396	0.349
160	0.506	0.448	0.395	0.347

Table 8. Viscosity (mPa sec)

°C	30%	40%	50%	60%
-50				
-45				
-40				
-35				524.110
-30			171.640	330.490
-25			109.790	211.530
-20		49.000	72.520	138.060
-15		33.170	49.390	92.100
-10	11.940	23.210	34.610	62.880
-5	9.170	16.730	24.910	43.940
0	7.170	12.400	18.380	31.420
5	5.710	9.420	13.870	22.970
10	4.620	7.310	10.690	17.150
15	3.790	5.800	8.400	13.060
20	3.160	4.690	6.720	10.140
25	2.670	3.850	5.460	8.010
30	2.290	3.220	4.510	6.440
35	1.980	2.720	3.780	5.250
40	1.730	2.340	3.200	4.350
45	1.530	2.030	2.750	3.650
50	1.360	1.780	2.380	3.100
55	1.230	1.580	2.090	2.670
60	1.110	1.410	1.850	2.320
65	1.020	1.280	1.650	2.030
70	0.930	1.160	1.480	1.800
75	0.860	1.060	1.340	1.610
80	0.800	0.980	1.220	1.450
85	0.750	0.910	1.120	1.320
90	0.700	0.850	1.030	1.200
95	0.660	0.790	0.960	1.110
100	0.630	0.750	0.890	1.020
105	0.600	0.700	0.840	0.950
110	0.570	0.670	0.790	0.890
115	0.550	0.640	0.740	0.840
120	0.520	0.610	0.700	0.790
125	0.510	0.580	0.670	0.750
130	0.490	0.560	0.640	0.710
135	0.470	0.540	0.610	0.680
140	0.460	0.520	0.580	0.650
145	0.440	0.500	0.560	0.620
150	0.430	0.490	0.540	0.600
155	0.420	0.480	0.520	0.580
160	0.410	0.460	0.500	0.560

Table 9. Vapour pressure (kPa)

°C	30%	40%	50%	60%
50	11.7	11.3	10.8	9.9
55	14.9	14.3	13.7	12.6
60	18.8	18.0	17.3	15.9
65	23.5	22.6	21.7	19.9
70	29.3	28.0	27.0	24.8
75	36.1	34.6	33.4	30.6
80	44.2	42.4	40.9	37.5
85	53.8	51.6	49.9	45.7
90	65.1	62.4	60.4	55.4
95	78.4	75.1	72.7	66.7
100	93.7	89.9	87.1	80.0
105	111.6	107.0	103.8	95.3
110	132.1	126.7	123.0	112.9
115	155.7	149.3	145.0	133.2
120	182.6	175.1	170.2	156.4
125	213.3	204.5	198.9	182.9
130	248.0	237.8	231.4	212.8
135	287.2	275.4	268.1	246.7
140	331.3	317.7	309.4	284.8
145	380.7	365.2	355.8	327.6
150	435.9	418.2	407.6	375.5
155	497.4	477.2	465.3	428.8
160	565.7	542.7	529.4	488.0

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

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

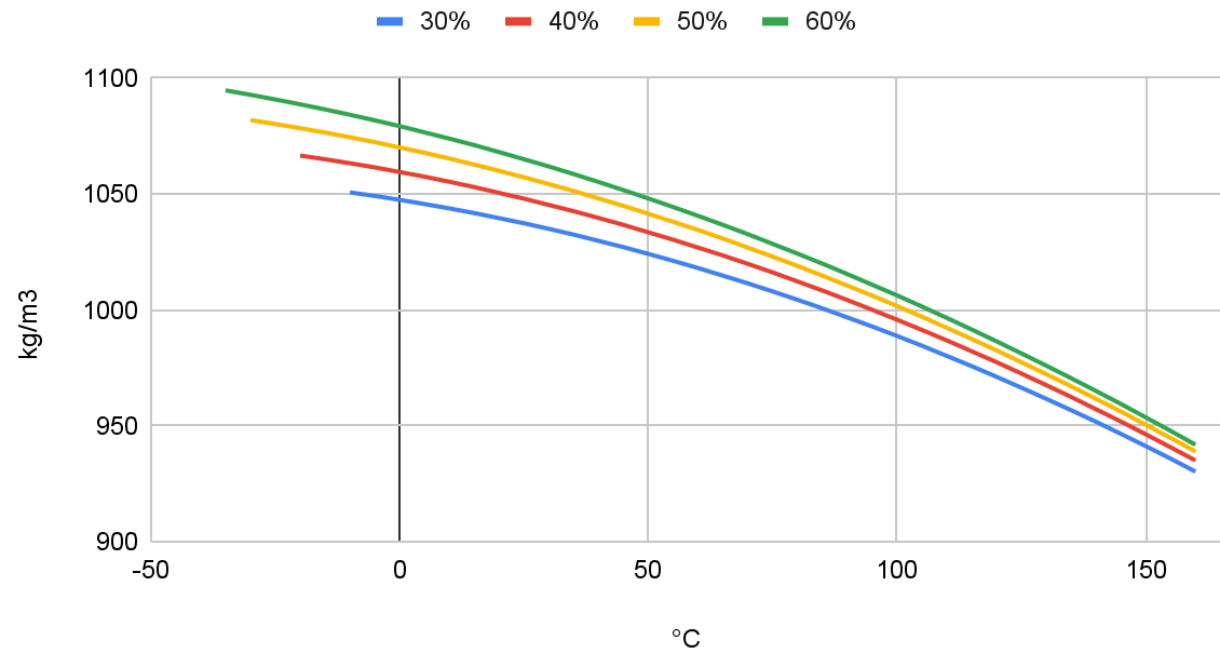


Chart 2 - Specific Heat (kJ/kg K) at 30%, 40% and 50%

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

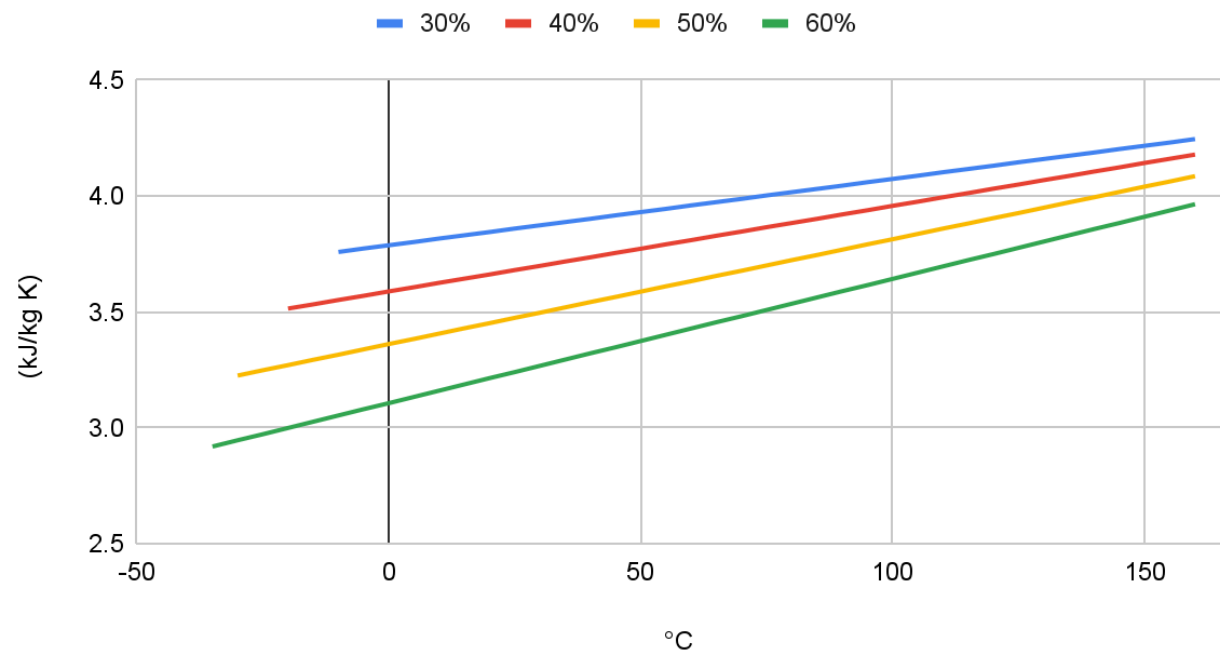


Chart 3 - Thermal Conductivity (W/mK) at 30%, 40% and 50%

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

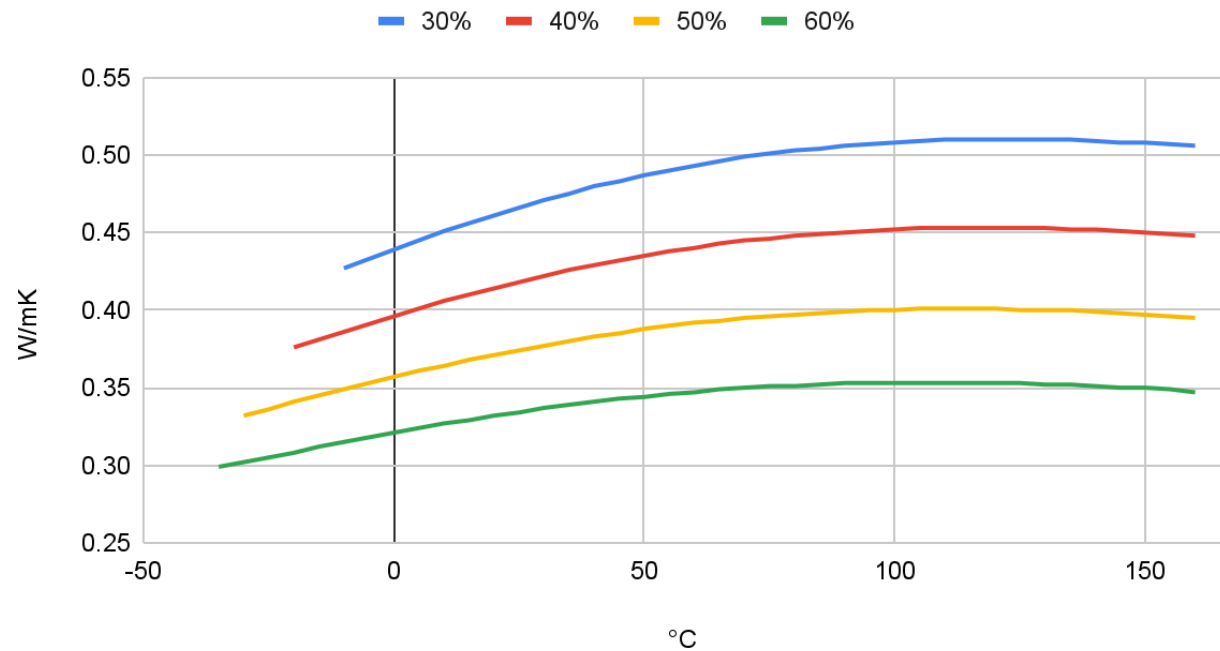


Chart 4 - Fluid Viscosity (mPa) at 30%, 40% and 50%

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

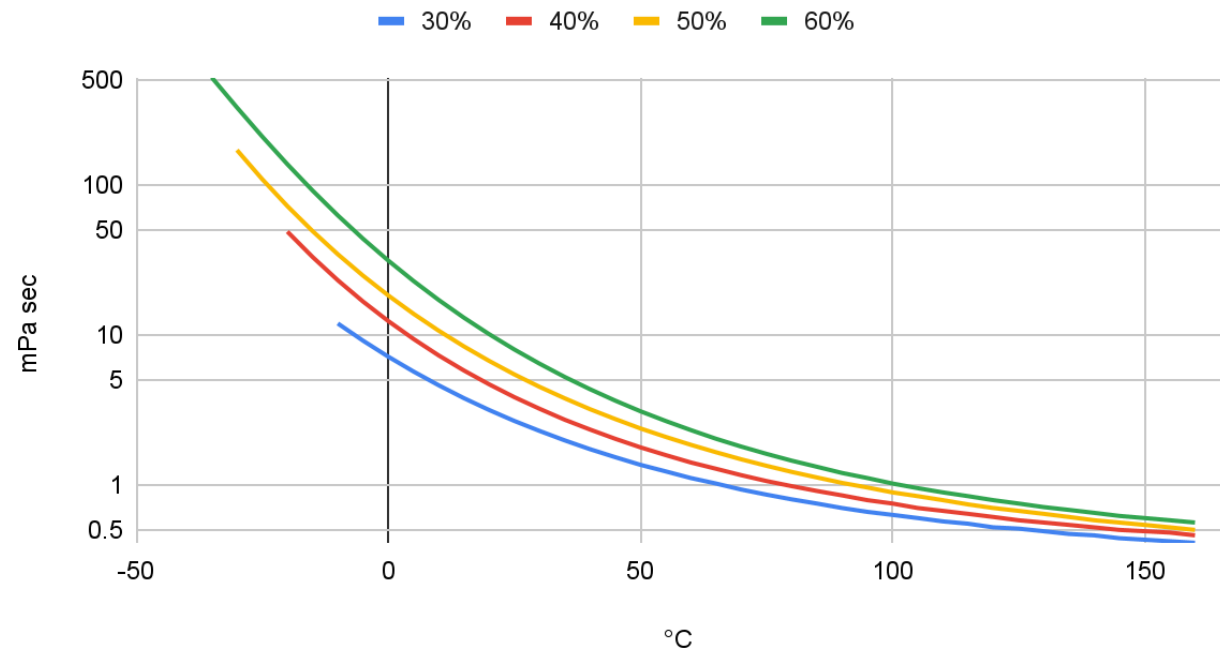
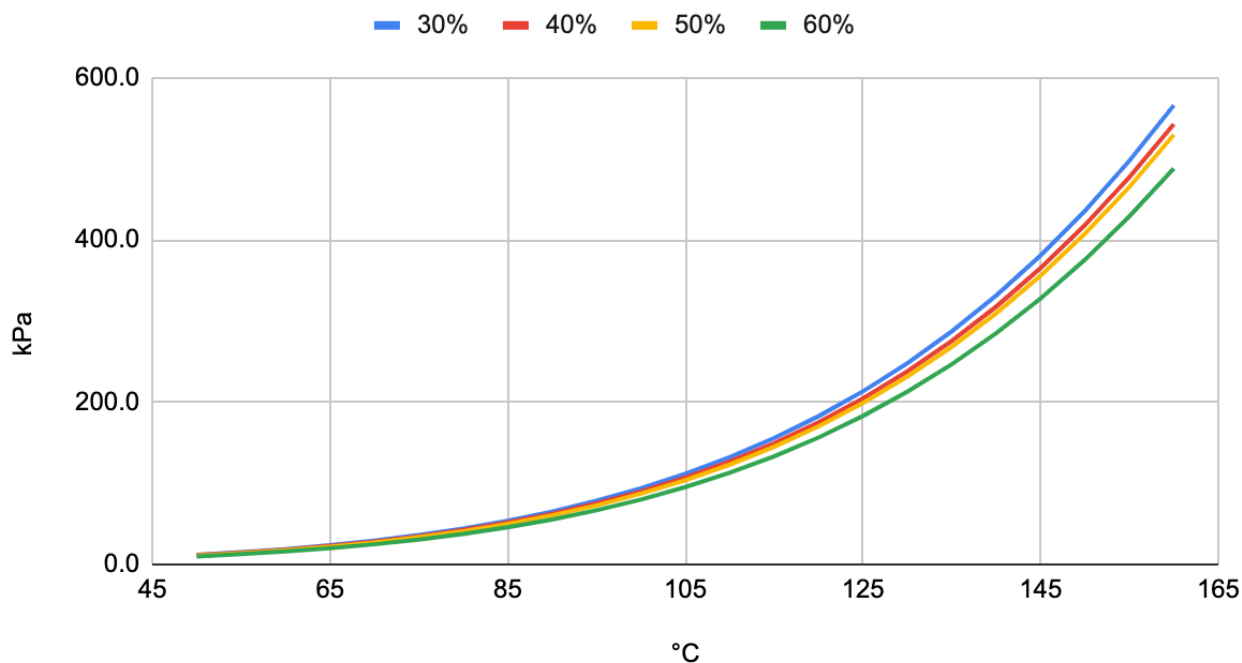


Chart 5 - Vapour Pressure (kPa) at 30%, 40% and 50%

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.