

Inhibited Ethylene Glycol Heat Transfer Fluids

Process Applications

- HVAC/R
- Food & beverage
- Solar Applications
- Thermal Storage
- Process cooling & heating
- Ice & snow melting systems
- Refrigeration systems
- Line heaters
- Plastic extrusion
- Geothermal energy
- Winterization
- Cooling towers

Dynalene EG Series Overview

Dynalene ethylene glycol products are comprised of inhibited and uninhibited ethylene glycol solutions. Dynalene ethylene glycols are blended with specially formulated additive packages depending on your system specifications. Our line of ethylene glycol heat transfer fluids provides users with stable, safe, and efficient products for applications where freeze protection is needed. We only use high quality virgin glycol in our glycol products, never recycled. All raw materials are tested and approved by our quality control department prior to use.

Properly used and maintained, Dynalene ethylene glycols provide excellent thermophysical properties while protecting your system from corrosion and degradation. Each individual ethylene glycol-based product has its own advantages, and custom blends can be readily made to meet your system's requirements.

Product	Description	Temperature Range
Dynalene EG	Inhibited ethylene glycol	-60°F to 250°F / -46°C to 121°C
Dynalene EG-XT	High-temperature inhibited ethylene glycol	-60°F to 350°F / -46°C to 177°C
Dynalene EG-V1	Inhibited ethylene glycol for aluminum systems	-60°F to 194°F / -46°C to 90°C
Dynalene Raw EG	Uninhibited technical grade ethylene glycol	Contact Dynalene

Corrosion Protection

Dynalene's inhibited ethylene glycol products utilize a unique corrosion inhibitor package made from non-toxic raw materials. These inhibitors offer superior corrosion protection for most metals including carbon steel, brass, copper, stainless steel, cast iron, and many other alloys by creating a passive layer on the surface that contacts the Dynalene ethylene glycol and prevents corrosion from forming. It also stabilizes the pH of the fluid, keeping it in the range that is suitable for the metals in your system.

Price, Quantity, & Availability

Dynalene ethylene glycol products are offered in 1, 2.5, 5, 30, 55, and 265 gallon containers as well as 5,000 gallon tankers. Pricing depends on quantity, however, Dynalene, Inc. will work with you to try and fit your budget.

Dynalene's Fluid Care Program

Coupling our Dynalene fluids with a fluid care program can extend the life of your systems significantly. We offer yearly testing of the heat transfer fluid in your system and tracks the changes in the fluid year to year so adjustments can be made to keep your system working at its best.

Dynalene only uses deionized water when blending our glycol-water mixtures

Water Ion	Dynalene Spec
Chloride	< 25 ppm
Sulfate	< 25 ppm
Other	< 50 ppm

General Properties

	Dynalene EG	Dynalene EG-XT	Dynalene EG-V1	Dynalene Raw EG
pH	8.0 – 9.0	8.5 – 10.0	9.0 – 11.5	6.0 – 8.0
Reserve Alkalinity	>10.5 mL	>25.0 mL	>10.5 mL	0 mL
Operating Range	-60 to 250°F	-60 to 350°F	-60 to 194°F	Contact Dynalene
Flash Point (Conc <85%)	None	None	None	None
Color	Clear	Clear	Clear	Clear
Odor	Little or none	Little or none	Little or none	Little or none

Freeze and burst points of Dynalene ethylene glycol solutions:

Vol. % EG	Wt. % EG	Freeze Point		Burst Point		Boiling Point °F	Refractive Index 22°C (72°F)	Specific Gravity 22°C (72°F)
		°F	°C	°F	°C			
0	0	32	0.0	32	0.0	212	1.3328	1.000
5	5.6	29	-1.7	27	-2.7	213	1.3380	1.008
10	11.2	26	-3.3	23	-4.9	214	1.3440	1.020
15	16.6	22	-5.5	17	-8.6	215	1.3495	1.026
20	22.0	16	-8.5	8	-13.2	216	1.3551	1.033
25	27.3	10	-12.2	-2	-18.8	218	1.3606	1.040
26	28.4	9	-12.8	-4	-20.1	219	1.3618	1.041
27	29.4	8	-13.3	-6	-21.4	219	1.3628	1.042
28	30.5	6	-14.4	-9	-22.7	220	1.3640	1.044
29	31.5	5	-15.0	-11	-24.0	220	1.3651	1.045
30	32.6	4	-15.6	-14	-25.4	220	1.3662	1.047
31	33.6	3	-16.1	-16	-26.8	220	1.3674	1.048
32	34.7	1	-17.2	-20	-28.9	220	1.3685	1.049
33	35.7	0	-17.8	-25	-31.7	221	1.3695	1.050
34	36.7	-2	-18.9	-33	-36.1	221	1.3706	1.052
35	37.7	-3	-19.4	-45	-42.8	221	1.3717	1.053
36	38.8	-5	-20.6	-60	-51.1	221	1.3728	1.054
37	39.8	-7	-21.7	-60	-51.1	222	1.3738	1.056
38	40.8	-9	-22.8	-60	-51.1	222	1.3749	1.057
39	41.9	-11	-23.9	-60	-51.1	222	1.3761	1.058
40	42.9	-13	-25.0	-60	-51.1	223	1.3773	1.060
41	43.9	-15	-26.1	-60	-51.1	223	1.3784	1.061
42	44.9	-17	-27.2	-60	-51.1	224	1.3795	1.062
43	46.0	-19	-28.3	-60	-51.1	224	1.3807	1.064
44	47.0	-21	-29.4	-60	-51.1	224	1.3817	1.065
45	48.0	-24	-31.1	-60	-51.1	224	1.3828	1.066
46	49.0	-26	-32.2	-60	-51.1	224	1.3838	1.068
47	50.0	-29	-33.9	-60	-51.1	225	1.3848	1.069
48	51.0	-31	-35.0	-60	-51.1	225	1.3859	1.070
49	52.0	-33	-36.1	-60	-51.1	225	1.3869	1.072
50	53.0	-36	-37.8	-60	-51.1	226	1.3879	1.073
55	57.9	-50	-45.6	-60	-51.1	228	1.3930	1.081
60	62.8	< -60	< -51.1	-60	-51.1	232	1.3982	1.086
70	72.4	< -60	< -51.1	-60	-51.1	244	1.4077	1.100
75	77.2	< -60	< -51.1	-60	-51.1	251	1.4132	1.106
80	81.8	-52	-46.7			263	1.4171	1.110
90	91.0	-20	-28.9			290	1.4266	1.118
100	100	2	-16.7			317	1.4300	1.127

Viscosity

1 cP= 0.001 Pa·s

Dynalene Ethylene Glycol Series, Viscosity, cP									
Temp, °F	Volume								
	20%	25%	30%	35%	40%	45%	50%	55%	60%
-30									89.7
-20							40.4	50.5	60.5
-10							27.3	34.7	42.1
0					13.8	16.6	19.3	24.7	30.1
10			6.83	8.47	10.1	12.2	14.3	18.2	22.1
20	3.90	4.64	5.38	6.56	7.74	9.32	10.9	13.8	16.6
30	3.14	3.74	4.33	5.21	6.09	7.29	8.48	10.6	12.7
40	2.59	3.07	3.54	4.23	4.91	5.84	6.77	8.34	9.90
50	2.18	2.57	2.95	3.50	4.04	4.77	5.50	6.68	7.85
60	1.86	2.18	2.49	2.94	3.38	3.97	4.55	5.44	6.33
70	1.61	1.87	2.13	2.50	2.87	3.34	3.81	4.49	5.17
80	1.41	1.63	1.84	2.15	2.46	2.85	3.23	3.76	4.28
90	1.24	1.42	1.60	1.87	2.13	2.45	2.76	3.17	3.58
100	1.11	1.26	1.41	1.64	1.87	2.13	2.39	2.71	3.03
120	0.90	1.01	1.11	1.29	1.46	1.64	1.82	2.03	2.23
140	0.74	0.82	0.90	1.04	1.17	1.30	1.43	1.56	1.69
160	0.63	0.69	0.75	0.85	0.95	1.05	1.15	1.24	1.32
180	0.54	0.59	0.63	0.71	0.79	0.87	0.94	1.00	1.06
200	0.47	0.51	0.54	0.61	0.67	0.73	0.78	0.82	0.86
220	0.41	0.44	0.46	0.52	0.57	0.62	0.66	0.69	0.72

Thermal Conductivity

1 Btu/hr·ft·°F = 1.73 W/mK

Dynalene Ethylene Glycol Series, Thermal Conductivity, Btu/hr·ft·°F									
Temp, °F	Volume								
	20%	25%	30%	35%	40%	45%	50%	55%	60%
-30									0.178
-20							0.193	0.187	0.181
-10							0.197	0.191	0.184
0					0.216	0.208	0.200	0.193	0.186
10			0.238	0.229	0.220	0.212	0.204	0.197	0.189
20	0.264	0.254	0.243	0.234	0.224	0.216	0.207	0.199	0.191
30	0.269	0.258	0.247	0.237	0.227	0.219	0.210	0.202	0.194
40	0.274	0.263	0.251	0.241	0.231	0.222	0.212	0.204	0.196
50	0.279	0.267	0.255	0.245	0.234	0.225	0.215	0.207	0.198
60	0.284	0.272	0.259	0.248	0.237	0.228	0.218	0.209	0.200
70	0.288	0.276	0.263	0.252	0.240	0.230	0.220	0.211	0.202
80	0.292	0.279	0.266	0.255	0.243	0.233	0.223	0.214	0.204
90	0.296	0.283	0.269	0.258	0.246	0.236	0.225	0.216	0.206
100	0.299	0.286	0.272	0.260	0.248	0.238	0.227	0.218	0.208
120	0.305	0.291	0.277	0.265	0.253	0.242	0.230	0.220	0.210
140	0.311	0.297	0.282	0.269	0.256	0.245	0.233	0.223	0.213
160	0.315	0.300	0.285	0.272	0.259	0.248	0.236	0.226	0.215
180	0.318	0.303	0.288	0.275	0.262	0.250	0.238	0.228	0.217
200	0.320	0.305	0.290	0.277	0.263	0.252	0.240	0.229	0.218
220	0.321	0.306	0.291	0.278	0.265	0.253	0.240	0.230	0.219

1 Btu/lb_m·°F = 4,186 J/kg·°C

Specific Heat

Dynalene Ethylene Glycol Series, Specific Heat, Btu/lb·°F									
Temp, °F	Volume								
	20%	25%	30%	35%	40%	45%	50%	55%	60%
-30									0.669
-20							0.730	0.702	0.674
-10							0.735	0.708	0.680
0					0.792	0.766	0.740	0.713	0.686
10			0.845	0.821	0.796	0.771	0.745	0.719	0.692
20	0.894	0.871	0.848	0.825	0.801	0.776	0.751	0.725	0.698
30	0.897	0.875	0.852	0.829	0.805	0.781	0.756	0.730	0.704
40	0.900	0.878	0.856	0.833	0.810	0.786	0.761	0.736	0.710
50	0.903	0.882	0.860	0.837	0.814	0.790	0.766	0.741	0.716
60	0.907	0.886	0.864	0.842	0.819	0.796	0.772	0.747	0.722
70	0.910	0.889	0.868	0.846	0.824	0.801	0.777	0.753	0.728
80	0.913	0.892	0.871	0.850	0.828	0.805	0.782	0.758	0.734
90	0.916	0.896	0.875	0.854	0.833	0.807	0.781	0.761	0.740
100	0.919	0.899	0.879	0.858	0.837	0.815	0.793	0.770	0.746
120	0.925	0.906	0.887	0.867	0.846	0.825	0.803	0.780	0.757
140	0.931	0.913	0.895	0.875	0.855	0.835	0.814	0.792	0.769
160	0.938	0.920	0.902	0.884	0.865	0.845	0.824	0.803	0.781
180	0.944	0.927	0.910	0.892	0.874	0.855	0.835	0.814	0.793
200	0.950	0.934	0.918	0.901	0.883	0.864	0.845	0.825	0.805
220	0.956	0.941	0.925	0.909	0.892	0.874	0.856	0.837	0.817

1 lb_m/ft³ = 16 kg/m³

Density

Dynalene Ethylene Glycol Series, Density, lb/ft ³									
Temp, °F	Volume								
	20%	25%	30%	35%	40%	45%	50%	55%	60%
-30									70.40
-20							69.26	69.76	70.26
-10							69.12	69.61	70.10
0					67.93	68.45	68.97	69.46	69.94
10			66.68	67.24	67.79	68.31	68.82	69.30	69.78
20	65.36	65.96	66.55	67.10	67.64	68.15	68.66	69.13	69.60
30	65.23	65.82	66.41	66.95	67.49	67.99	68.49	68.96	69.43
40	65.10	65.69	66.27	66.80	67.33	67.83	68.32	68.78	69.24
50	64.97	65.54	66.11	66.64	67.17	67.66	68.14	68.61	69.08
60	64.83	65.40	65.96	66.48	66.99	67.48	67.96	68.41	68.86
70	64.68	65.24	65.79	66.31	66.82	67.30	67.77	68.22	68.66
80	64.52	65.07	65.62	66.13	66.63	67.11	67.58	68.02	68.46
90	64.36	64.91	65.45	65.95	66.44	66.91	67.38	67.82	68.25
100	64.20	64.74	65.27	65.76	66.25	66.71	67.17	67.60	68.03
120	63.85	64.37	64.88	65.36	65.84	66.29	66.74	67.16	67.58
140	63.47	63.98	64.48	64.95	65.41	65.85	66.28	66.69	67.10
160	63.07	63.56	64.05	64.50	64.95	65.38	65.80	66.21	66.61
180	62.65	63.12	63.59	64.03	64.47	64.89	65.30	65.70	66.09
200	62.20	62.66	63.11	63.54	63.97	64.38	64.78	65.16	65.54
220	61.72	62.17	62.61	63.03	63.44	63.84	64.23	64.61	64.98

1 psi = 6,895 Pa = 0.069 bar = 0.0681 atm = 51.7 mmHg = 21.7 inH₂O

Vapor Pressure

Temp, °F	Dynalene Ethylene Glycol Series, Vapor Pressure, psia								
	Volume								
	20%	25%	30%	35%	40%	45%	50%	55%	60%
100	0.9	0.9	0.8						
110	1.2	1.2	1.1	1.1	1.0				
120	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.2	1.1
130	2.0	2.0	2.0	1.9	1.8	1.8	1.7	1.6	1.5
140	2.7	2.6	2.5	2.5	2.4	2.3	2.2	2.1	2.0
150	3.5	3.4	3.3	3.2	3.1	3.1	2.8	2.6	2.6
160	4.4	4.3	4.2	4.1	3.9	3.8	3.6	3.5	3.3
170	5.6	5.5	5.3	5.2	5.0	4.8	4.6	4.4	4.2
180	7.0	6.6	6.2	6.3	6.3	6.1	5.8	5.6	5.3
190	8.7	8.5	8.3	8.1	7.8	7.5	7.2	6.9	6.6
200	10.8	10.6	10.3	10.0	9.7	9.7	9.0	8.2	8.2
210	13.2	12.9	12.6	12.2	11.8	11.4	11.0	10.5	10.0
220	16.4	15.9	15.3	14.9	14.4	13.9	13.4	12.9	12.3
230	19.4	19.0	18.5	18.0	17.5	16.9	16.2	15.6	14.9
240	23.3	22.8	22.3	21.7	21.0	20.3	19.5	18.7	17.9
250	27.9	26.6	26.6	25.9	25.1	25.1	23.3	21.4	21.4
260	33.1	32.4	31.6	30.7	29.8	28.8	27.7	26.6	25.4
270	39.1	38.2	37.3	36.3	35.2	34.0	32.8	31.5	30.1
280	46.0	45.0	43.9	42.7	41.4	40.0	38.5	36.9	35.3
290	53.8	52.6	51.3	49.9	48.4	46.7	45.0	43.2	41.3
300	62.6	61.2	59.7	58.0	56.3	56.3	52.4	48.1	48.1
310	72.6	70.9	69.2	67.2	65.2	63.0	60.7	60.7	55.7
320	83.7	81.8	79.8	77.5	75.2	72.6	69.9	67.1	64.3
330	96.2	94.0	91.7	89.1	86.4	83.4	80.3	77.1	73.8
340	110.2	107.6	105.0	102.0	98.9	95.4	91.8	88.1	84.4
350	125.7	122.7	119.7	116.2	112.7	108.7	104.6	100.4	96.2

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