Dynalene PEG Series

DYNALENE
Tomorrow's Solutions Flow Through Us

Polyethylene glycol heat transfer fluids

Process Applications

- Mold release agents
- Open bath systems
- Lubricants
- Cosmetics
- Pharmaceuticals
- Ice & snow melting systems
- Refrigeration systems
- Line heaters
- Plastic extrusion
- Inks
- Plasticizers

Dynalene PEG Series Overview

Dynalene PEG products are comprised of uninhibited polyethylene glycol fluids. Dynalene offers four different polyethylene glycols of different molecular weights: PEG-200, PEG-300, PEG-400, and PEG-600. Each Dynalene PEG product offers different advantages depending on your application, and custom blends can be readily made based to meet your system's requirements. Our line of polyethylene glycols have high flash points and excellent thermal stability in high temperature open environments, and provide better open bath system performance than traditional ethylene or propylene glycols.

Properly used and maintained, Dynalene polyethylene glycols provide excellent high temperature performance with minimal change in thermophysical properties when exposed to high temperatures for extended periods of time. 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.

Product	Description	Melting Range	Flash Point
Dynalene PEG-200	Polyethylene glycol, MW_{range} = 190 – 210	< 0°C (< 32°F)	185°C (365°F)
Dynalene PEG-300	Polyethylene glycol, MW_{range} = 285 - 315	< -8°C (< 18°F)	218°C (424°F)
Dynalene PEG-400	Polyethylene glycol, MW_{range} = 380 - 420	< 8°C (< 46°F)	227°C (441°F)
Dynalene PEG-600	Polyethylene glycol, MW_{range} = 570 - 630	< 20°C (< 68°F)	238°C (460°F)

Evaporation weight loss during high temperature open bath testing at 200°C

Bath Temp, °C	PEG-200	PEG-300	PEG-400	PEG-600
Wt. loss after 2 hrs	0.94 %	0.76 %	1.01 %	0.78 %
Wt. loss after 4 hrs	3.54 %	3.01 %	1.33 %	1.53 %
Wt. loss after 6 hrs	4.77 %	2.69 %	2.55 %	2.01 %

Viscosity change during high temperature open bath testing after 6 hours

Bath Temp, °C	PEG-200	PEG-300	PEG-400	PEG-600
180	+ 0.7 %	+ 0.1 %	+ 1.3 %	- 0.6 %
200	+ 1.6 %	+ 0.0 %	- 1.3 %	+ 1.9 %
220	+ 1.1 %	+ 0.0 %	- 2.0 %	- 2.0 %

Price, Quantity, & Availability

Dynalene polyethylene 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.

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Dynalene, Inc. is an ISO 9001 certified company

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Properties of Dynalene PEG Fluids

Temp		Density, kg/m³			
°C	°F	PEG-200	PEG-300	PEG-400	PEG-600
0	32	1,141	1,142		
5	41	1,137	1,138		
10	50	1,133	1,134	1,135	
15	59	1,129	1,130	1,130	
20	68	1,125	1,126	1,126	1,127
30	86	1,117	1,118	1,118	1,118
40	104	1,109	1,110	1,110	1,110
50	122	1,101	1,102	1,102	1,102
60	140	1,093	1,093	1,094	1,094
70	158	1,085	1,085	1,085	1,085
80	176	1,077	1,077	1,077	1,077
90	194	1,069	1,069	1,069	1,069
100	212	1,061	1,061	1,061	1,061
120	248	1,045	1,045	1,045	1,045
140	284	1,028	1,028	1,028	1,028
160	320	1,013	1,013	1,011	1,012
180	356	995	995	995	995
200	392	979	979	980	980

1 kg/m³ = 0.0624 lb/ft³

Temp		Viscosity, cP			
°C	°F	PEG-200	PEG-300	PEG-400	PEG-600
0	32	161.2	229.0		
5	41	126.3	179.0		
10	50	99.7	141.1	183.8	
15	59	79.4	111.2	144.3	
20	68	63.8	88.9	115.1	141.5
30	86	42.0	58.0	74.5	92.2
40	104	28.4	38.9	49.8	62.5
50	122	19.7	26.7	34.1	43.3
60	140	13.9	18.8	23.9	30.7
70	158	10.1	13.5	17.1	22.2
80	176	7.41	9.85	12.5	16.4
90	194	5.55	7.33	9.26	12.3
100	212	4.22	5.54	6.98	9.34
120	248	2.54	3.30	4.14	5.64
140	284	1.61	2.07	2.59	3.58
160	320	1.06	1.35	1.69	2.36
180	356	0.73	0.92	1.14	1.62
200	392	0.51	0.65	0.80	1.15

1 cP = 0.001 Pa·s

Temp		Specific heat, J/kg·K			
°C	°F	PEG-200	PEG-300	PEG-400	PEG-600
0	32	2,097	2,086		
5	41	2,100	2,089		
10	50	2,103	2,093	2,082	
15	59	2,107	2,096	2,086	
20	68	2,110	2,099	2,089	2,078
30	86	2,117	2,106	2,095	2,085
40	104	2,123	2,113	2,102	2,092
50	122	2,130	2,119	2,109	2,098
60	140	2,137	2,126	2,115	2,105
70	158	2,144	2,132	2,122	2,111
80	176	2,150	2,139	2,128	2,118
90	194	2,157	2,146	2,135	2,124
100	212	2,164	2,152	2,141	2,131
120	248	2,177	2,165	2,155	2,144
140	284	2,190	2,179	2,168	2,157
160	320	2,204	2,192	2,181	2,170
180	356	2,217	2,205	2,194	2,183
200	392	2,231	2,218	2,207	2,196

1 J/kg·K = 0.000239 BTU/lb·°F

Temp		Thermal conductivity, W/m·K			
°C	°F	PEG-200	PEG-300	PEG-400	PEG-600
0	32	0.188	0.187	0.186	0.184
5	41	0.190	0.189	0.188	0.186
10	50	0.191	0.190	0.189	0.187
15	59	0.193	0.192	0.191	0.189
20	68	0.195	0.194	0.193	0.191
30	86	0.199	0.198	0.197	0.195
40	104	0.202	0.201	0.200	0.198
50	122	0.206	0.205	0.204	0.202
60	140	0.209	0.208	0.207	0.205
70	158	0.213	0.212	0.211	0.209
80	176	0.216	0.215	0.214	0.212
90	194	0.220	0.219	0.218	0.216
100	212	0.223	0.222	0.221	0.219
120	248	0.230	0.229	0.228	0.226
140	284	0.237	0.236	0.235	0.233
160	320	0.244	0.243	0.242	0.240
180	356	0.251	0.250	0.249	0.247
200	392	0.259	0.258	0.257	0.255

1 W/m·K = 0.578 BTU/hr·ft·°F