

Propylene glycol-based Direct-To-Chip (DTC) coolants

Process Applications

- Data center cooling
- Direct to chip cooling
- Electronics cooling
- Crypto Mining
- Racks and Coolant Distribution Units (CDU)
- High performance computing (HPC)
- Cold plate cooling

■ Dynalene PG-D Series Overview

The Dynalene PG-D coolant series consists of Dynalene PG-D15, PG-D25 and PG-D55, designed to provide direct liquid cooling solutions for data centers, AI and high-performance computing. These DTC coolants are fully formulated, prediluted propylene glycol-water solutions blended with a proprietary inhibitor package. If on-site dilution is needed, PG-D100 concentrate can be supplied.

With the high-performance computing requirements of modern data centers, air cooling cannot provide the required thermal management, which can affect the longevity and performance of the electronic components. Dynalene PG-D coolants provide exceptional liquid cooling along with superior multi-metal corrosion protection, including the copper cold plates used in most coolant distribution units (CDU). Our coolants also provide protection against algae and bacteria growth.

Dynalene PG-D coolants are compatible with commonly used materials of construction in data centers, thereby increasing the electronic component lifetime. These coolants provide freeze protection, increase Power Usage Efficiency (PUE), increase cooling efficiency in direct to chip cooling, and reduce carbon footprint when compared to air cooling.

■ Quantity & Availability

Dynalene PG-D 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, and Dynalene, Inc. will work with you to try to 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 can track changes in the fluid year to year so adjustments can be made to keep your system working at its best.

Recommended Temperature Range:

Closed System:
Up to 80°C (176°F)

■ Properties of Dynalene PG-D Series

A comprehensive list of all thermo-physical properties of Dynalene PG-D can be found on page 2. For health and safety information or to request a Safety Data Sheet, contact a Dynalene sales representative.

Composition:	Propylene Glycol, Water, Inhibitors, Biocide (optional)		
Appearance:	Clear (dye options available)		
Odor:	None		
Freezing Point:	PG-D15:	-5°C (23°F)	
	PG-D25:	-10°C (14°F)	
	PG-D55:	-41.7°C (-43°F)	
pH		8.0 to 10.5	
Boiling Point:		>100°C (>212°F)	
Flash Point:		None	
Autoignition Temp:		None	
Reserve Alkalinity:		≥ 2.5 mL	

■ ASTM D8040 Corrosion Weight Loss

	Copper (mg)	Brass (mg)
Raw PG-25	5.0	5.3
PG-D25	1.3	2.1
Raw PG-55	24.7	57.9
PG-D55	1.6	1.1

■ Benefits of Choosing Dynalene PG-D

- Enhances data center performance
- Non-toxic
- Non-flammable
- Available worldwide
- Cost-effective
- Fluid and equipment longevity
- Exceptional corrosion protection

General Properties

Dynalene PG-D15

Temp °F	Viscosity cP	Thermal Cond. BTU/hr-ft.°F	Specific Heat BTU/lb.°F	Density lb/ft ³	Vapor Pressure psia
30	3.52	0.280	0.985	63.705	
40	2.85	0.286	0.986	63.610	
50	2.34	0.291	0.986	63.495	
60	1.96	0.296	0.986	63.380	
70	1.67	0.300	0.987	63.250	
80	1.43	0.304	0.987	63.115	
90	1.24	0.308	0.989	62.965	
100	1.09	0.311	0.990	62.720	1.0
120	0.86	0.315	0.992	62.370	1.7
140	0.70	0.323	0.994	61.980	2.9
160	0.58	0.327	0.997	61.550	4.7
180	0.49	0.330	1.000	61.080	7.3

Dynalene PG-D25

Temp °F	Viscosity cP	Thermal Cond. BTU/hr-ft.°F	Specific Heat BTU/lb.°F	Density lb/ft ³	Vapor Pressure psia
20	7.63	0.251	0.919	64.57	
30	5.85	0.255	0.922	64.47	
40	4.58	0.260	0.925	64.35	
50	3.66	0.264	0.929	64.23	
60	2.97	0.268	0.932	64.09	
70	2.45	0.272	0.935	63.95	
80	2.05	0.275	0.939	63.80	
90	1.74	0.278	0.942	63.64	
100	1.49	0.281	0.945	63.47	0.9
120	1.14	0.283	0.952	63.09	1.7
140	0.90	0.290	0.958	62.68	2.8
160	0.73	0.293	0.965	62.23	4.5
180	0.61	0.296	0.972	61.74	7.1

Dynalene PG-D55

Temp °F	Viscosity cP	Thermal Cond. BTU/hr-ft.°F	Specific Heat BTU/lb.°F	Density lb/ft ³	Vapor Pressure psia
-20	140	0.181	0.185	66.70	-
-10	131	0.182	0.186	66.53	-
0	82.8	0.185	0.187	66.41	-
10	54.0	0.188	0.837	66.28	-
20	36.4	0.189	0.841	66.13	-
30	25.3	0.192	0.846	65.98	-
40	18.1	0.194	0.851	65.82	-
50	13.3	0.196	0.855	65.65	-
60	9.92	0.198	0.860	65.47	-
70	7.61	0.200	0.865	65.27	-
80	5.96	0.201	0.870	65.07	-
90	4.76	0.202	0.874	64.86	-
100	3.86	0.204	0.878	64.64	-
120	2.66	0.205	0.884	64.16	1.5
140	1.94	0.206	0.893	63.66	2.4
160	1.47	0.208	0.902	63.11	4.0
180	1.16	0.210	0.911	62.51	6.2

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