

Typical Freezing and Boiling Points of Aqueous Solutions of DOWFROST™ and DOWFROST™ HD†

Freezing Point						Boiling Point			
°F	°C	Wt% Propylene Glycol	Vol % Propylene Glycol	Vol % DOWFROST™	Vol % DOWFROST™ HD	°F 760 mm Hg	°C @ 0.96 Barr	Degree Brix ^{1†}	Refractive Index 22°C
32.0	0.0	0.0	0.0	0.0	0.0	212	100	0.0	1.3328
29.1	-1.6	5.0	4.8	5.0	5.1	212	100	4.8	1.3383
26.1	-3.3	10.0	9.6	10.0	10.2	212	100	8.4	1.3438
22.9	-5.1	15.0	14.5	15.1	15.4	212	100	12.9	1.3495
19.2	-7.1	20.0	19.4	20.3	20.6	213	101	15.4	1.3555
18.3	-7.6	21.0	20.4	21.3	21.7	213	101	16.0	1.3567
17.6	-8.0	22.0	21.4	22.4	22.8	213	101	16.7	1.3579
16.6	-8.6	23.0	22.4	23.4	23.8	213	101	17.4	1.3591
15.6	-9.1	24.0	23.4	24.5	24.9	213	101	18.4	1.3603
14.7	-9.6	25.0	24.4	25.5	26.0	214	101	19.0	1.3615
13.7	-10.2	26.0	25.3	26.5	26.9	214	101	19.6	1.3627
12.6	-10.8	27.0	26.4	27.6	28.1	214	101	20.2	1.3639
11.5	-11.4	28.0	27.4	28.6	29.1	215	102	20.8	1.3651
10.4	-12.0	29.0	28.4	29.7	30.2	215	102	21.4	1.3663
9.2	-12.7	30.0	29.4	30.7	31.3	216	102	22.0	1.3675
7.9	-13.4	31.0	30.4	31.8	32.3	216	102	22.7	1.3687
6.6	-14.1	32.0	31.4	32.8	33.4	216	102	23.6	1.3698
5.3	-14.8	33.0	32.4	33.9	34.5	216	102	24.4	1.3710
3.9	-15.6	34.0	33.5	35.0	35.6	216	102	25.3	1.3721
2.4	-16.4	35.0	34.4	36.0	36.6	217	103	26.1	1.3733
0.8	-17.3	36.0	35.5	37.1	37.8	217	103	26.9	1.3744
-0.8	-18.2	37.0	36.5	38.2	38.8	217	103	27.5	1.3756
-2.4	-19.1	38.0	37.5	39.2	39.9	218	103	28.0	1.3767
-4.2	-20.1	39.0	38.5	40.3	41.0	218	103	28.5	1.3779
-6.0	-21.1	40.0	39.6	41.4	42.1	219	104	29.1	1.3790
-7.8	-22.1	41.0	40.6	42.4	43.2	219	104	29.6	1.3802
-9.8	-23.2	42.0	41.6	43.5	44.3	219	104	30.2	1.3813
-11.8	-24.3	43.0	42.6	44.5	45.3	219	104	30.7	1.3825
-13.9	-25.5	44.0	43.7	45.7	46.5	219	104	31.3	1.3836
-16.1	-26.7	45.0	44.7	46.7	47.6	220	104	31.8	1.3847
-18.3	-27.9	46.0	45.7	47.8	48.6	220	104	32.4	1.3858
-20.7	-29.3	47.0	46.8	48.9	49.8	220	104	33.0	1.3870
-23.1	-30.6	48.0	47.8	50.0	50.9	221	105	33.5	1.3881
-25.7	-32.1	49.0	48.9	51.1	52.0	221	105	34.1	1.3892
-28.3	-33.5	50.0	49.9	52.2	53.1	222	106	34.7	1.3903
-31.0	-35.0	51.0	50.9	53.2	54.1	222	106	35.5	1.3914
-33.8	-36.6	52.0	51.9	54.3	55.2	222	106	35.9	1.3924
-36.7	-38.2	53.0	53.0	55.4	56.4	223	106	36.6	1.3935
-39.7	-39.8	54.0	54.0	56.5	57.4	223	106	37.2	1.3945
-42.8	-41.6	55.0	55.0	57.5	58.5	223	106	38.0	1.3956
-46.0	-43.3	56.0	56.0	58.5	59.6	223	106	38.5	1.3966
-49.3	-45.2	57.0	57.0	59.6	60.6	224	107	39.0	1.3977
-52.7	-47.1	58.0	58.0	60.6	61.7	224	107	39.6	1.3987
-56.2	-49.0	59.0	59.0	61.7	62.8	224	107	40.1	1.3998
-59.9	-51.1	60.0	60.0	62.7	63.8	225	107	40.6	1.4008
b	b	65.0	65.0	68.0	69.1	227	108	42.1	1.4058
b	b	70.0	70.0	73.2	74.5	230	110	44.1	1.4104
b	b	75.0	75.0	78.4	79.8	237	114	46.1	1.4150
b	b	80.0	80.0	83.6	85.1	245	118	48.0	1.4193
b	b	85.0	85.0	88.9	90.4	257	125	50.0	1.4235
b	b	90.0	90.0	94.1	95.7	270	132	51.4	1.4275
b	b	95.0	95.0	99.3	a	310	154	52.8	1.4315

^aPropylene glycol concentrations greater than 94% are not attainable with DOWFROST™ HD fluid. • ^bFreezing points are below -60°F (-51°C). • ¹Typical properties, not to be construed as specifications.

[†]Degree Brix is a measure of the sugar concentration in a fluid and is important in fermentation and syrups applications. • Although there is no sugar present in DOWFROST™ Heat Transfer Fluids, the glycol affects the refractive index of the fluid in a similar fashion. NOTE: Generally, for an extended margin of protection, you should select a temperature in this table that is at least 5°F (3°C) lower than the expected lowest ambient temperature. Inhibitor levels in glycol solutions less than 25-30% may not provide adequate corrosion protection. Solutions of glycol less than 25% may be at risk for bacterial contamination.

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