



Technical Data Sheet

DOWCAL™ 200

Inhibited Propylene Glycol-based Heat Transfer Fluid

Recommended Usage

DOWCAL™ 200 is a propylene glycol-based heat transfer fluid for use in a wide range of applications, including HVAC, ground source heat pumps, and solar panels. Low acute toxicity makes DOWCAL™ 200 especially suitable for applications where toxicity is a concern.

Recommended use temperature range:

-50°C(-60°F) to 175°C (350°F)

Key Benefits of DOWCAL™ 200

- Improved corrosion protection, in particular for aluminum alloys
- Suitable for use at a minimum 20% concentration for high and low temperatures
- Hard water stability to enable use with local tap water
- Compatible with commonly used elastomers
- Long fluid lifetime, lowering maintenance cost
- Low acute oral toxicity
- Free of nitrite, borax and CMR (carcinogenic, mutagenic, and reprotoxic)

Geographical Availability

DOWCAL™ 200 is available in Europe, Middle-East, Africa and India

Typical Properties of DOWCAL™ 200 † Heat Transfer Fluid

Composition (% by weight)	
Propylene Glycol	92
Inhibitors and Water	8
Color	Colorless
Density at 20°C	
g/cm ³	1.045 - 1.055
pH of Solution	
(50% vol. in Water)	7.2 - 7.6
Reserve Alkalinity (min.)	10.0 ml

† Typical properties, not to be construed as specifications.
Complete Sales Specifications are available on request.

Typical Freezing, Boiling Points and Other Properties of DOWCAL™ 200†

DOWCAL™ 200	DOWCAL™ 200	Freezing Point	Refractive Index	Boiling Point	Density	Dyn. Viscosity	Kin. Viscosity
Vol.%	Wt.	°C	@ 20°C	°C @ 1bara	g/cm ³ @ 20°C	mPa.s @ 20°C	mm ² /s @ 20°C
5.0	5.3	-1.6	1.3391	100	1.006	1.36	1.95
10.0	10.5	-3.3	1.3452	100	1.011	1.62	1.66
15.0	15.8	-5.3	1.3513	101	1.015	1.93	1.81
20.0	20.9	-7.5	1.3573	101	1.020	2.30	2.11
21.0	22.0	-8.0	1.3585	101	1.021	2.39	2.18
22.0	23.0	-8.5	1.3597	101	1.022	2.48	2.26
23.0	24.0	-9.1	1.3609	102	1.022	2.57	2.34
24.0	25.1	-9.6	1.3621	102	1.023	2.66	2.42
25.0	26.1	-10.2	1.3633	102	1.024	2.76	2.51
26.0	27.1	-10.8	1.3645	102	1.025	2.87	2.61
27.0	28.2	-11.4	1.3657	102	1.026	2.97	2.71
28.0	29.2	-12.1	1.3669	102	1.027	3.09	2.81
29.0	30.2	-12.7	1.3681	102	1.028	3.20	2.92
30.0	31.2	-13.4	1.3693	102	1.029	3.33	3.04
31.0	32.3	-14.1	1.3704	102	1.030	3.45	3.16
32.0	33.3	-14.8	1.3716	102	1.031	3.58	3.29
33.0	34.3	-15.6	1.3728	102	1.032	3.72	3.42
34.0	35.3	-16.4	1.3739	102	1.033	3.87	3.56
35.0	36.3	-17.2	1.3751	102	1.034	4.02	3.70
36.0	37.4	-18.0	1.3762	103	1.035	4.17	3.85
37.0	38.4	-18.9	1.3774	103	1.036	4.34	4.01
38.0	39.4	-19.8	1.3785	103	1.037	4.51	4.17
39.0	40.4	-20.7	1.3797	103	1.038	4.68	4.35
40.0	41.4	-21.7	1.3808	103	1.039	4.87	4.53
41.0	42.4	-22.7	1.3820	103	1.039	5.06	4.71
42.0	43.4	-23.7	1.3831	103	1.040	5.26	4.91
43.0	44.4	-24.8	1.3842	103	1.041	5.47	5.12
44.0	45.4	-25.8	1.3853	103	1.042	5.69	5.33
45.0	46.4	-27.0	1.3864	103	1.043	5.92	5.55
46.0	47.5	-28.1	1.3875	104	1.044	6.16	5.79
47.0	48.5	-29.3	1.3886	104	1.045	6.40	6.03
48.0	49.5	-30.5	1.3897	104	1.046	6.66	6.29
49.0	50.5	-31.8	1.3908	104	1.047	6.93	6.55
50.0	51.5	-33.1	1.3919	104	1.048	7.22	6.83
51.0	52.5	-34.5	1.3930	105	1.048	7.51	7.12
52.0	53.5	-35.9	1.3941	105	1.049	7.82	7.42
53.0	54.4	-37.3	1.3951	105	1.050	8.14	7.74
54.0	55.4	-38.7	1.3962	105	1.051	8.48	8.07
55.0	56.4	-40.3	1.3973	105	1.052	8.83	8.41
56.0	57.4	-41.8	1.3983	106	1.053	9.20	8.77
57.0	58.4	-43.4	1.3993	106	1.053	9.58	9.14
58.0	59.4	-45.0	1.4004	106	1.054	9.98	9.54
59.0	60.4	-46.7	1.4014	106	1.055	10.4	9.94
60.0	61.4	-48.5	1.4024	107	1.056	10.8	10.4
65.0	66.3	<-51	1.4074	108	1.059	13.3	12.8
70.0	71.2	<-51	1.4122	109	1.062	16.5	15.8
75.0	76.1	<-51	1.4168	111	1.064	20.4	19.5
80.0	80.9	<-51	1.4212	113	1.066	25.4	24.1
85.0	85.7	<-51	1.4253	116	1.066	31.6	29.8
90.0	90.5	<-51	1.4291	121	1.065	39.5	36.9
95.0	95.3	<-51	1.4327	129	1.062	49.5	45.7
100.0	100.0	<-51	1.4360	142	1.057	62.3	56.5

† Typical properties, not to be construed as specifications.

NOTE: Generally, for an extended margin of protection, you should select a temperature in this table that is at least 3°C lower than the expected lowest ambient temperature. Please contact Dow on specific cases or further assistance.

Saturation properties of DOWCAL™ 200 Fluid at 30% Volume Concentration

Temperature °C	Specific Heat kJ / (kg) (K)	Density kg/m ³	Thermal Conductivity W/mK	Viscosity mPa.s
0	3.762	1.041	0.417	7.812
25	3.829	1.026	0.446	2.780
50	3.897	1.011	0.467	1.327
100	4.032	0.981	0.489	0.512
130	4.114	0.962	0.491	0.355
160	4.195	0.944	0.487	0.271

Saturation properties of DOWCAL™ 200 Fluid at 40% Volume Concentration

Temperature °C	Specific Heat kJ / (kg) (K)	Density kg/m ³	Thermal Conductivity W/mK	Viscosity mPa.s
0	3.576	1.051	0.376	12.500
25	3.663	1.036	0.399	3.993
50	3.751	1.020	0.417	1.765
100	3.926	0.990	0.434	0.617
130	4.032	0.972	0.435	0.412
160	4.137	0.953	0.431	0.305

Saturation properties of DOWCAL™ 200 Fluid at 50% Volume Concentration

Temperature °C	Specific Heat kJ (kg) (K)	Density kg/m ³	Thermal Conductivity W/mK	Viscosity mPa.s
0	3.367	1.060	0.337	20.326
25	3.474	1.045	0.356	5.809
50	3.582	1.029	0.370	2.370
100	3.797	0.999	0.384	0.748
130	3.925	0.981	0.384	0.487
160	4.054	0.962	0.379	0.345

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Literature Identification

