



## 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 <sup>3</sup>	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 <sup>3</sup> @ 20°C	mPa.s @ 20°C	mm <sup>2</sup> /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 <sup>3</sup>	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 <sup>3</sup>	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 <sup>3</sup>	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

#### Contact Us to Learn More:

Dow Customer Information Group  
International Toll-free: +800 3 694 63 67  
Toll Phone: +31 115 67 2626

[dowcig@dow.com](mailto:dowcig@dow.com)

[www.dowcal.com](http://www.dowcal.com)

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