

**Product Descriptions for DOWTHERM\*, DOWFROST\*, and DOWCAL\*  
Inhibited Glycol-based Heat Transfer Fluids**

	<b>DOWTHERM SR-1</b>	<b>DOWTHERM 4000</b>	<b>DOWCAL 10</b>	<b>DOWFROST</b>	<b>DOWFROST HD</b>	<b>DOWCAL 20</b>	<b>DOWCAL N</b>
	Inhibited Ethylene Glycol	Inhibited Ethylene Glycol	Inhibited Ethylene Glycol	Inhibited Propylene Glycol	Inhibited Propylene Glycol	Inhibited Propylene Glycol	Inhibited Propylene Glycol
Composition, % by weight							
Glycols	95.4	92.4	93.5	95.5	94.0	93.5	95.5
Inhibitors & Water	4.6	7.6	6.5	4.5	6.0	6.5	4.5
Color	Fluorescent Pink	Fluorescent Orange	Pale Yellow <sup>1</sup>	Colorless	Fluorescent Yellow	Pale Yellow <sup>1</sup>	Pale Yellow <sup>1</sup>
Specific Gravity at 15/15°C (60/60°F)	1.1250–1.1350	1.130–1.144	1.125–1.135	1.050–1.060	1.053–1.063	1.050–1.060	1.050–1.060
pH of Solution Containing 50% Glycol	9.0–9.6	8.5–9.0	7.6–8.2	9.0–10.0	9.5–10.5	7.2–8.2	9.0–10.0
Reserve Alkalinity, Minimum	11.0 ml	25.0 ml	10.0 ml	10.0 ml	15.0 ml	8.0 ml	10.0 ml

<sup>1</sup>Color available on request

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**Typical Properties<sup>†</sup> of Aqueous Solutions of DOWTHERM, DOWFROST, and DOWCAL Inhibited Glycol-based Heat Transfer Fluids (glycol concentrations 50% by volume)**

		<b>DOWTHERM SR-1</b>	<b>DOWTHERM 4000</b>	<b>DOWCAL 10</b>	<b>DOWFROST</b>	<b>DOWFROST HD</b>	<b>DOWCAL 20</b>	<b>DOWCAL N</b>
Max. Operating Temp., °C (°F)		121 (250)	175 (350)	175 (350)	121 (250)	160 (320)	160 (325)	120 (250)
Freezing Point, °C (°F)		-37 (-34)	-37 (-34)	-37 (-34)	-34 (-28)	-34 (-28)	-34 (-28)	-34 (-28)
Physical Property	Temp. °C (°F)							
Thermal Conductivity W/(m)(K) [Btu/(hr · ft <sup>2</sup> )(°F/ft)]	5 (40)	0.3682 (0.212)	0.3682 (0.212)	0.369 (0.212)	0.3528 (0.204)	0.3528 (0.204)	0.354 (0.204)	0.354 (0.204)
	80 (180)	0.4114 (0.238)	0.4114 (0.238)	0.413 (0.238)	0.3815 (0.221)	0.3815 (0.221)	0.383 (0.221)	0.383 (0.221)
	120 (250)	0.4168 (0.241)	0.4168 (0.241)	0.418 (0.241)	0.3792 (0.219)	0.3792 (0.219)	0.380 (0.219)	0.381 (0.219)
	175 (350)	NA	0.4043 (0.233)	0.406 (0.233)	NA	0.3645 <sup>††</sup> (0.210 <sup>††</sup> )	0.366 (0.210 <sup>††</sup> )	NA
Specific Heat kJ/(kg)(K) [Btu/(lb · °F)]	5 (40)	3.225 (0.770)	3.190 (0.762)	3.218 (0.762)	3.474 (0.830)	3.323 (0.794)	3.465 (0.794)	3.484 (0.830)
	80 (180)	3.515 (0.842)	3.486 (0.835)	3.510 (0.835)	3.763 (0.902)	3.662 (0.878)	3.757 (0.878)	3.771 (0.902)
	120 (250)	3.670 (0.878)	3.644 (0.872)	3.665 (0.872)	3.918 (0.937)	3.843 (0.920)	3.913 (0.920)	3.925 (0.937)
	175 (350)	NA	3.862 (0.925)	3.880 (0.925)	NA	4.024 <sup>††</sup> (0.965 <sup>††</sup> )	4.068 (0.965 <sup>††</sup> )	NA
Viscosity mPa(s) (cps)	5 (40)	6.63 (6.8)	6.63 (6.8)	6.54 (6.8)	13.77 (14.0)	13.77 (14.0)	13.6 (14.0)	13.6 (14.0)
	80 (180)	0.98 (0.94)	0.98 (0.94)	0.97 (0.94)	1.12 (1.1)	1.12 (1.1)	1.12 (1.1)	1.12 (1.1)
	120 (250)	0.53 (0.52)	0.53 (0.52)	0.52 (0.52)	0.60 (0.59)	0.60 (0.59)	0.60 (0.59)	0.60 (0.59)
	175 (350)	NA	0.28 (0.27)	0.28 (0.27)	NA	0.40 <sup>††</sup> (0.40 <sup>††</sup> )	0.40 (0.40 <sup>††</sup> )	NA
Density kg/m <sup>3</sup> (lb/ft <sup>3</sup> )	5 (40)	1080 (67.47)	1092 (68.32)	1081 (68.32)	1051 (65.67)	1067 (66.68)	1052 (66.68)	1051 (65.67)
	80 (180)	1039 (64.80)	1047 (65.30)	1040 (65.30)	1002 (62.45)	1019 (63.50)	1002 (63.50)	1002 (62.45)
	120 (250)	1006 (62.78)	1015 (63.36)	1007 (63.36)	964 (60.11)	982 (61.27)	964 (61.27)	964 (60.11)
	175 (350)	NA	964 (60.10)	950 (60.10)	NA	939 <sup>††</sup> (58.42 <sup>††</sup> )	918 (58.42 <sup>††</sup> )	NA

<sup>†</sup> Properties shown are typical and should not be considered specifications.

<sup>††</sup> At 160°C (325°F)



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