



# DURATHERM XLT-50

Engineered for long term operation in heat transfer applications requiring precise temperature control ranging from  $-45^{\circ}\text{C}$  ( $-50^{\circ}\text{F}$ ) up to  $121^{\circ}\text{C}$  ( $250^{\circ}\text{F}$ ).

Duratherm XLT-50's economic cost and wide operating temperature also makes it well suited for heating and cooling applications found in the food processing, pharmaceutical and chemical industries etc.

## APPLICATION

Duratherm XLT-50 is engineered for long term operation in heat transfer applications requiring precise temperature control ranging from  $-45^{\circ}\text{C}$  ( $-50^{\circ}\text{F}$ ) up to  $121^{\circ}\text{C}$  ( $250^{\circ}\text{F}$ ).

## TROUBLE-FREE OPERATION

Duratherm XLT-50 does not requiring monitoring of concentration or additive levels.

## LASTS LONGER

Duratherm XLT-50 utilizes our exclusive additive system for long term, trouble free operation at any temperature, high or low.

## ENVIRONMENTAL

Duratherm XLT-50 is plant and user friendly. Low odors, high flash point and no SARA reportable substances makes Duratherm XLT-50 the wise choice for worker health and safety.

## DISPOSAL

After its extensive service life Duratherm XLT-50 can be disposed of through local waste oil recycling programs. Check with your local regulations.

# DURATHERM XLT-50

- Maximum temperature: 121°C/250°F
- Minimum temperature: -45°C/-50°F
- Flash point 85°C/185°F
- Extreme low-temperature capabilities
- Stable and non-corrosive
- Properties remain consistent over temperature range
- Includes free fluid analysis and tech support



[www.durathermfluids.it](http://www.durathermfluids.it)

## TEMPERATURE RATINGS

Maximum Bulk/Use Temp.	121°C	250°F
Minimum Bulk/Use Temp.	-45°C	-50°F
Maximum Film Temp.	198°C	390°F
Pour Point ASTM D97	-56°C	-70°F

## SAFETY DATA

Flash Point ASTM D92	85°C	185°F
Fire Point ASTM D92	104°C	220°F

## THERMAL PROPERTIES

Thermal Conductivity	W/m K	BTU/hr F ft
-30°C / -22°F	0.137	0.079
30°C / 86°F	0.136	0.079
176°C / 350°F	0.135	0.078
Heat Capacity	kJ/kg K	BTU/lb F
-30°C / -22°F	1.914	0.459
30°C / 86°F	2.065	0.500
176°C / 350°F	2.528	0.602

## PHYSICAL PROPERTIES

Appearance: clear liquid, slight yellow tint		
Viscosity ASTM D445		
cSt at -30°C / -22°F	5.57	
cSt at 30°C / 86°F	1.90	
cSt at 176°C / 350°F	0.65	
Density ASTM D1298		
-30°C / -22°F	861.36	53.77
30°C / 86°F	809.68	50.55
176°C / 350°F	683.95	42.66
Vapor Pressure ASTM D2879		
-30°C / -22°F	0.00	0.00
38°C / 100°F	0.20	0.02
176°C / 350°F	59.38	8.61
Distillation Range ASTM D2887		
	10%	181°C (358°F)
	90%	285°C (546°F)

The values quoted are typical of normal production. They do not constitute a specification.

TEMPERATURE (Celsius)	DENSITY (kg/m <sup>3</sup> )	KINEMATIC VISCOSITY (Centistoke)	DYNAMIC VISCOSITY (Centipoise)	THERMAL CONDUCTIVITY (W/m-K)	HEAT CAPACITY (kJ/kg-K)	VAPOR PRESSURE (kPa)
-45	874.28	8.45	7.39	0.137	1.880	0.00
-35	865.66	6.34	5.48	0.137	1.903	0.00
-25	857.05	4.93	4.23	0.137	1.926	0.00
-15	848.44	3.96	3.36	0.137	1.950	0.00
-5	839.83	3.26	2.74	0.137	1.974	0.00
5	831.22	2.74	2.28	0.137	2.000	0.00
15	822.60	2.34	1.93	0.137	2.025	0.00
25	813.99	2.04	1.66	0.136	2.052	0.00
35	805.38	1.79	1.44	0.136	2.079	0.06
45	796.77	1.60	1.27	0.136	2.106	0.79
55	788.15	1.44	1.13	0.136	2.135	1.70
65	779.54	1.30	1.02	0.136	2.164	2.60
75	770.93	1.19	0.92	0.136	2.193	4.10
85	762.32	1.10	0.84	0.136	2.224	6.15
95	753.71	1.02	0.77	0.136	2.254	9.50
105	745.09	0.95	0.71	0.135	2.286	13.74
115	736.48	0.89	0.65	0.135	2.318	18.29
121	731.24	0.86	0.63	0.135	2.361	21.51

The values quoted are typical of normal production. They do not constitute a specification.

# DURATHERM XLT-50

## PROPERTY VS. TEMPERATURE CHART STANDARD

TEMPERATURE (Fahrenheit)	DENSITY (lb/ft <sup>3</sup> )	KINEMATIC VISCOSITY (Centistoke)	DYNAMIC VISCOSITY (Centipoise)	THERMAL CONDUCTIVITY (BTU/hr-F-ft)	HEAT CAPACITY (BTU/lb-F)	VAPOR PRESSURE (Psia)
-50	54.61	8.60	7.52	0.079	0.448	0.00
-40	54.31	7.28	6.34	0.079	0.452	0.00
-30	54.01	6.24	5.40	0.079	0.456	0.00
-20	53.71	5.41	4.66	0.079	0.460	0.00
-10	53.41	4.75	4.06	0.079	0.464	0.00
0	53.12	4.20	3.57	0.079	0.467	0.00
10	52.82	3.74	3.17	0.079	0.471	0.00
20	52.52	3.36	2.83	0.079	0.475	0.00
30	52.22	3.04	2.54	0.079	0.479	0.00
40	51.92	2.76	2.30	0.079	0.483	0.00
50	51.62	2.53	2.09	0.079	0.487	0.00
60	51.32	2.32	1.91	0.079	0.491	0.00
70	51.02	2.15	1.76	0.079	0.494	0.00
80	50.73	1.99	1.62	0.079	0.498	0.00
90	50.43	1.86	1.50	0.079	0.502	0.00
100	50.13	1.73	1.39	0.079	0.506	0.02
110	49.83	1.63	1.30	0.079	0.510	0.09
120	49.53	1.53	1.22	0.079	0.514	0.17
130	49.23	1.44	1.14	0.079	0.517	0.23
140	48.93	1.37	1.07	0.079	0.521	0.31
150	48.64	1.30	1.01	0.079	0.525	0.39
160	48.34	1.23	0.96	0.078	0.529	0.48
170	48.04	1.18	0.91	0.078	0.533	0.65
180	47.74	1.12	0.86	0.078	0.537	0.81
190	47.44	1.07	0.82	0.078	0.541	0.98
200	47.14	1.03	0.78	0.078	0.544	1.30
210	46.84	0.99	0.74	0.078	0.548	1.53
220	46.54	0.95	0.71	0.078	0.552	1.93
230	46.25	0.92	0.68	0.078	0.556	2.33
240	45.95	0.89	0.65	0.078	0.560	2.72
250	45.65	0.86	0.63	0.078	0.564	3.12

The values quoted are typical of normal production. They do not constitute a specification.