Overview and applications

APPLICATION

StaticTherm LT is an oxidative and thermally stable, high performance, long lasting, environmentally friendly heat transfer fluid. StaticTherm LT is engineered with a broad temperature range offering precise temperature control between -29°C (-20°F) and 225°C (437°F).

StaticTherm LT is ideal for batch processing requiring heating and cooling cycles and eliminates the need for heat tracing in outdoor applications.

THE DIFFERENCE

Our exclusive additive package, including a proprietary dual stage anti-oxidant, ensures long trouble-free operation. StaticTherm LT also incorporates metal deactivators, a seal and gasket extender, defoaming and particle suspension agents.

LASTS LONGER

In the heat transfer fluid industry cost is always a concern, however fluid longevity and resistance to harmful fouling are of equal importance.

Air contact is normally detrimental to a fluid. Oxidation can cripple your system and if left unchecked will ultimately cause catastrophic

failure. Unscheduled downtime due to oil failure has a high cost and negative effect on production.

The StaticTherm product line was developed with this in mind. Most other fluids fall short in their protection from oxidation and can quickly foul a system. StaticTherm LT is engineered to give unsurpassed levels of protection and service life.

ENVIRONMENTAL

StaticTherm LT is environmentally friendly, non-toxic, non-hazardous and non-reportable. It poses no ill effect to worker safety and does not require special handling. After its long service life, StaticTherm LT can easily be disposed of with other waste oils.

SYSTEM CLEANING

If your existing fluid has let you down and left you with a system full of sludge or carbon, we've developed a full line of heat transfer system cleaners to get your system back to like-new condition. Contact us for complete details.

Engineered for applications requiring process temperatures

ranging from -29°C (-20°F) to 225°C (437°F). Ideal for batch processing requiring heating and cooling cycles. Eliminates the need for heat tracing in outdoor applications.

Ratings and physical properties

TEMPERATURE RATINGS

Maximum Bulk/Use Temp.	225°C	437°F
Maximum Film Temp.	242°C	467°F
Pour Point ASTM D97	-58°C	-72°F

SAFETY DATA

Flash Point ASTM D92	165°C	329°F
Fire Point ASTM D92	188°C	370°F
Autoignition ASTM E-659-78	245°C	473°F

- Maximum temperature: 225°C / 437°F

- Flash point 165°C / 329°F

- Non-toxic/non-hazardous

- Runs longer, keeps systems cleaner

- Low- to high- temperature capable

- Great for batch processing

- Includes free fluid analysis and tech support

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

THERMAL PROPERTIES

Thermal Expansion Coefficient	0.1016 %/°C	0.0564 %/°F
Thermal Conductivity	W/m K	BTU/hr F ft
38°C / 100°F	0.145	0.081
100°C / 212°F	0.140	0.081
204°C / 400°F	0.132	0.076
Heat Capacity	kJ/kg K	BTU/lb F
38°C / 100°F	2.166	0.518
100°C / 212°F	2.380	0.563
204°C / 400°F	2.740	0.723

PHYSICAL PROPERTIES

Appearance: colorless, clear and bright liquid		
Viscosity ASTM D445		
cSt at 40°C / 104°F	7.98	
cSt at 100°C / 212°F	2.34	
cSt at 204°C / 400°F	0.85	
Density ASTM D1298	Kg/m3	lb/ft3
38°C / 100°F	802.71	50.31
100°C / 212°F	763.28	47.6
204°C / 400°F	692.47	43.1
Vapor Pressure ASTM D2879	kPa	psi
38°C / 100°F	802.71	50.31
100°C / 212°F	763.28	47.6
204°C / 400°F	692.47	43.1
Distillation Range ASTM D2887	10%	324°C (616°F)
	90%	399°C (750°F)
Average Molecular Weight	395	

Temperature-dependent properties - metric

TEMPERATURE (Celsius)	DENSITY (kg/m^3)	KINEMATIC VISCOSITY (Centistoke)	DYNAMIC VISCOSITY (Centipoise)	THERMAL CONDUCTIVITY (W/m-K)	HEAT CAPACITY (kJ/kg-K)	VAPOR PRESSURE (kPa)
-30	852.24	280.49	239.04	0.151	1.932	0.00
-20	845.40	125.77	106.33	0.150	1.967	0.00
-10	838.55	64.59	54.17	0.149	2.001	0.00
0	831.71	36.93	30.72	0.148	2.036	0.00
10	824.87	23.00	18.97	0.147	2.070	0.00
20	818.02	15.34	12.55	0.147	2.104	0.00
30	811.18	10.82	8.78	0.146	2.139	0.00
40	804.34	7.98	6.42	0.145	2.173	0.01
50	797.49	6.11	4.87	0.144	2.208	0.01
60	790.65	4.82	3.81	0.143	2.242	0.02
70	783.81	3.91	3.06	0.143	2.276	0.03
80	776.96	3.24	2.51	0.142	2.311	0.05
90	770.12	2.73	2.10	0.141	2.345	0.09
100	763.28	2.34	1.79	0.140	2.380	0.15
110	756.43	2.03	1.54	0.139	2.414	0.23
120	749.59	1.79	1.34	0.138	2.448	0.34
130	742.75	1.59	1.18	0.138	2.483	0.52
140	735.90	1.43	1.05	0.137	2.517	0.77
150	729.06	1.29	0.94	0.136	2.552	1.12
160	722.22	1.18	0.85	0.135	2.586	1.59
170	715.37	1.08	0.78	0.134	2.620	2.22
180	708.53	1.00	0.71	0.134	2.655	3.07
190	701.69	0.93	0.65	0.133	2.689	4.17
200	694.84	0.87	0.61	0.132	2.724	5.61
210	688.00	0.82	0.56	0.131	2.758	7.45
220	681.16	0.77	0.53	0.130	2.792	9.77
230	674.31	0.73	0.49	0.129	2.827	12.68

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Temperature-dependent properties - imperial

TEMPERATURE (Fahrenheit)	DENSITY (lb/ft^3)	KINEMATIC VISCOSITY (Centistoke)	DYNAMIC VISCOSITY (Centipoise)	THERMAL CONDUCTIVITY (BTU/hr-F-ft)	HEAT CAPACITY (BTU/lb-F)	VAPOR PRESSURE (Psia)
-30	53.39	422.35	361.45	0.087	0.458	0.00
-20	53.16	254.59	216.91	0.087	0.463	0.00
-10	52.92	161.60	137.07	0.087	0.467	0.00
0	52.68	107.32	90.62	0.086	0.472	0.00
10	52.44	74.15	62.33	0.086	0.476	0.00
20	52.21	53.04	44.38	0.086	0.481	0.00
30	51.97	39.12	32.59	0.086	0.486	0.00
40	51.73	29.64	24.58	0.085	0.490	0.00
50	51.49	23.00	18.99	0.085	0.495	0.00
60	51.26	18.23	14.98	0.085	0.499	0.00
70	51.02	14.72	12.04	0.085	0.504	0.00
80	50.78	12.09	9.84	0.084	0.508	0.00
90	50.55	10.07	8.16	0.084	0.513	0.00
100	50.31	8.51	6.86	0.084	0.518	0.00
110	50.07	7.27	5.84	0.084	0.522	0.00
120	49.83	6.28	5.02	0.083	0.527	0.00
130	49.60	5.48	4.36	0.083	0.531	0.00
140	49.36	4.82	3.82	0.083	0.536	0.00
150	49.12	4.28	3.37	0.082	0.540	0.00
160	48.88	3.82	3.00	0.082	0.545	0.01
170	48.65	3.44	2.68	0.082	0.550	0.01
180	48.41	3.11	2.41	0.082	0.554	0.01
190	48.17	2.83	2.19	0.081	0.559	0.01
200	47.93	2.59	1.99	0.081	0.563	0.02
210	47.70	2.38	1.82	0.081	0.568	0.02
220	47.46	2.20	1.67	0.081	0.572	0.03
230	47.22	2.03	1.54	0.080	0.577	0.04
240	46.99	1.89	1.42	0.080	0.582	0.05
250	46.75	1.77	1.32	0.080	0.586	0.05
260	46.51	1.65	1.23	0.080	0.591	0.06
270	46.27	1.55	1.15	0.079	0.595	0.08
280	46.04	1.46	1.08	0.079	0.600	0.10
290	45.80	1.38	1.01	0.079	0.604	0.13
300	45.56	1.31	0.96	0.079	0.609	0.15
310	45.32	1.24	0.90	0.078	0.613	0.19
320	45.09	1.18	0.85	0.078	0.618	0.23
330	44.85	1.13	0.81	0.078	0.623	0.28
340	44.61	1.08	0.77	0.077	0.627	0.34
350	44.37	1.03	0.73	0.077	0.632	0.40
360	44.14	0.99	0.70	0.077	0.636	0.48
370	43.90	0.95	0.67	0.077	0.641	0.56
380	43.66	0.91	0.64	0.076	0.645	0.67
390	43.43	0.88	0.61	0.076	0.650	0.79
400	43.19	0.85	0.59	0.076	0.655	0.93
410	42.95	0.82	0.56	0.076	0.659	1.08
420	42.71	0.79	0.54	0.075	0.664	1.26
430	42.48	0.77	0.52	0.075	0.668	1.46
440	42.24	0.74	0.50	0.075	0.673	1.69

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