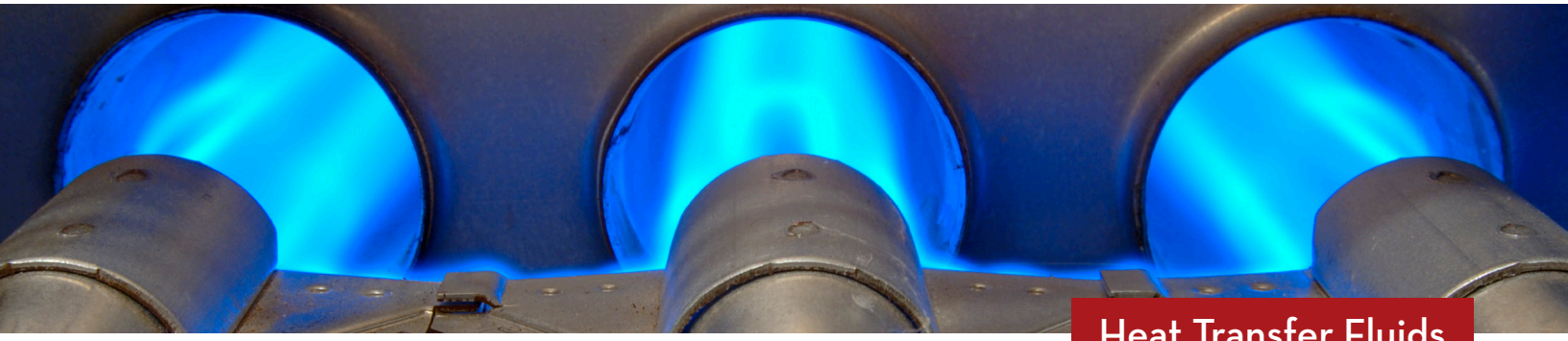
Caldera 7

Silicone Heat Transfer Fluid



Heat Transfer Fluids

Caldera 7 is a premium silicone heat transfer fluid. It is formulated with an advanced additive system for superior performance and also protects against oxidation, wear, rust and corrosion. Compatible with most silicone-based fluid technology on the market, Caldera 7 can be mixed at any ratio without issue. Caldera 7 is stable up to a maximum film temperature of 691°F (366°C), making it ideal for the most intensive heat transfer applications.

Applications

- Open-bath systems
- Closed loop systems with a maximum bulk temperature of 601°F (316°C)
- Open loop systems with a maximum bulk temperature of 400°F (204°C)

Performance Advantages

- **Ideal for open bath systems**
- **Impervious to oxidation**
  Ideal for systems prone to premature fluid degradation

Temperature Range

Typical Properties	Caldera 7
Minimum Temperature, °F (°C)	-63 (-53)
Maximum Film Temperature, °F (°C)	691 (366)
Maximum Bulk Temperature, Closed Systems, °F (°C)	601 (316)
Maximum Bulk Temperature, Open Systems, °F (°C)	400 (204)
Pour Point, °F (°C)	-87 (-66)
Flash Point ,°F (°C)	615 (324)
Fire Point, °F (°C)	637 (336)
Autoignition Point, °F (°C)	819 (437)
Thermal Expansion Coefficient, %/°C	0.105
Thermal Conductivity @ 38°C, W/m-K	0.133
Thermal Conductivity @ 260°C, W/m-K	0.101
Heat Capacity @ 38°C, kJ/kg-K	1.714
Heat Capacity @ 260°C, kJ/kg-K	2.137
Distillation Range (ASTM D2887), 10% °C	494
Distillation Range, 90%	679
Average Molecular Weight	--

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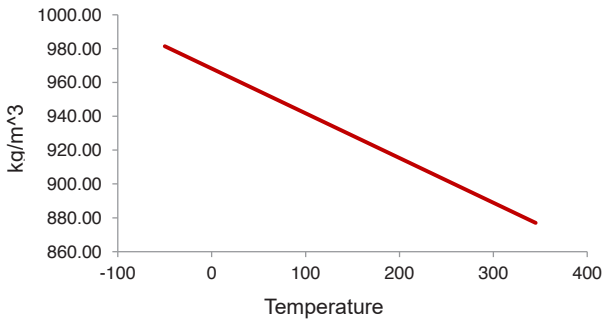
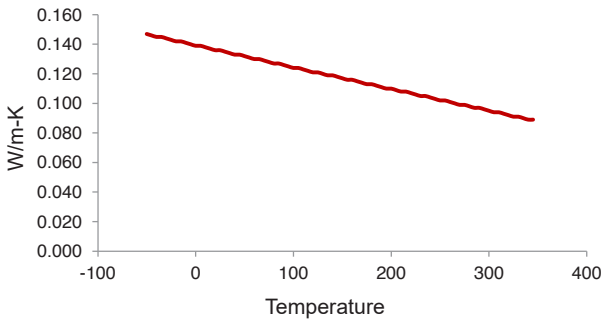
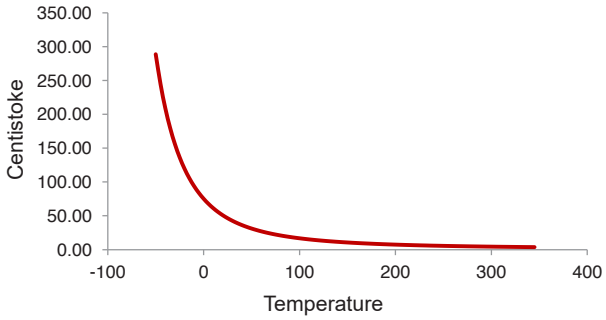
Density



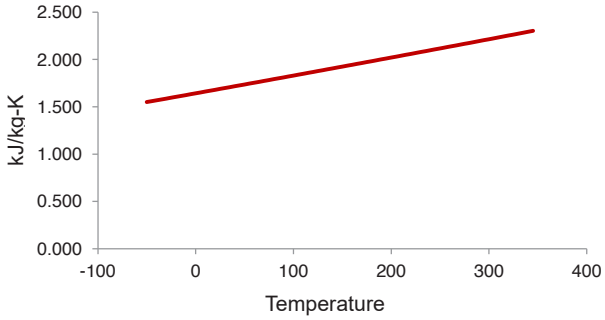
Thermal Conductivity



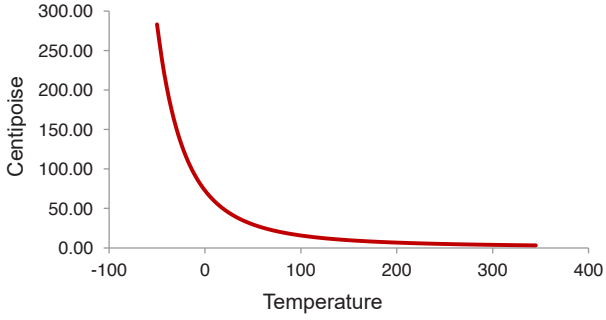
Kinematic Viscosity



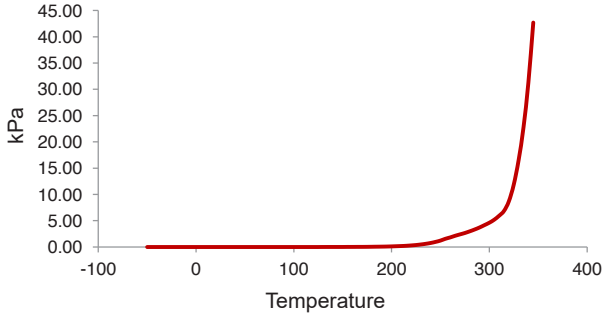
Heat Capacity



Dynamic Viscosity



Vapor Pressure



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Silicone Heat Transfer Fluid

Temperature (°C)	Density (kg/m^3)	Kinematic Viscosity (Centistoke)	Dynamic Viscosity (Centipoise)	Thermal Conductivity (W/m-K)	Heat Capacity (kJ/kg-K)	Vapor Pressure (kPa)
-50	981.39	288.71	283.33	0.147	1.551	0.00
-45	980.07	244.65	239.78	0.146	1.560	0.00
-40	978.75	209.03	204.58	0.145	1.569	0.00
-35	977.42	179.95	175.89	0.145	1.578	0.00
-30	976.10	156.02	152.30	0.144	1.587	0.00
-25	974.78	136.17	132.74	0.143	1.597	0.00
-20	973.46	119.58	116.41	0.142	1.606	0.00
-15	972.14	105.62	102.68	0.142	1.615	0.00
-10	970.82	93.79	91.06	0.141	1.624	0.00
-5	969.50	83.71	81.16	0.140	1.634	0.00
0	968.17	75.07	72.68	0.139	1.643	0.00
5	966.85	67.62	65.38	0.139	1.652	0.00
10	965.53	61.17	59.06	0.138	1.662	0.00
15	964.21	55.55	53.56	0.137	1.671	0.00
20	962.89	50.63	48.75	0.136	1.680	0.00
25	961.57	46.31	44.53	0.136	1.690	0.00
30	960.24	42.50	40.81	0.135	1.699	0.00
35	958.92	39.13	37.52	0.134	1.708	0.00
40	957.60	36.13	34.60	0.133	1.718	0.00
45	956.28	33.45	31.99	0.133	1.727	0.00
50	954.96	31.06	29.66	0.132	1.736	0.00
55	953.64	28.91	27.57	0.131	1.746	0.00
60	952.32	26.97	25.68	0.130	1.755	0.00
65	950.99	25.22	23.98	0.130	1.764	0.00
70	949.67	23.63	22.45	0.129	1.774	0.00
75	948.35	22.19	21.05	0.128	1.783	0.00
80	947.03	20.88	19.78	0.127	1.793	0.00
85	945.71	19.68	18.62	0.127	1.802	0.00
90	944.39	18.59	17.55	0.126	1.811	0.00
95	943.07	17.58	16.58	0.125	1.821	0.00
100	941.74	16.66	15.69	0.124	1.830	0.00
105	940.42	15.81	14.87	0.124	1.840	0.00
110	939.10	15.02	14.11	0.123	1.849	0.00
115	937.78	14.30	13.41	0.122	1.859	0.00
120	936.46	13.63	12.76	0.121	1.868	0.00
125	935.14	13.00	12.16	0.121	1.878	0.00
130	933.81	12.42	11.60	0.120	1.887	0.00
135	932.49	11.88	11.08	0.119	1.897	0.00

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140	931.17	11.38	10.60	0.119	1.906	0.01
145	929.85	10.91	10.14	0.118	1.916	0.01
150	928.53	10.47	9.72	0.117	1.925	0.01
155	927.21	10.06	9.33	0.116	1.935	0.02
160	925.89	9.67	8.96	0.116	1.944	0.02
165	924.56	9.31	8.61	0.115	1.954	0.03
170	923.24	8.97	8.28	0.114	1.963	0.03
175	921.92	8.65	7.97	0.113	1.973	0.03
180	920.60	8.35	7.68	0.113	1.982	0.05
185	919.28	8.06	7.41	0.112	1.992	0.06
190	917.96	7.79	7.15	0.111	2.002	0.07
195	916.64	7.54	6.91	0.110	2.011	0.09
200	915.31	7.30	6.68	0.110	2.021	0.12
205	913.99	7.07	6.46	0.109	2.030	0.16
210	912.67	6.85	6.25	0.108	2.040	0.19
215	911.35	6.65	6.06	0.108	2.050	0.23
220	910.03	6.45	5.87	0.107	2.059	0.30
225	908.71	6.27	5.69	0.106	2.069	0.38
230	907.38	6.09	5.53	0.105	2.079	0.48
235	906.06	5.92	5.37	0.105	2.088	0.61
240	904.74	5.76	5.21	0.104	2.098	0.77
245	903.42	5.61	5.07	0.103	2.108	0.97
250	902.10	5.46	4.93	0.102	2.117	1.22
255	900.78	5.32	4.79	0.102	2.127	1.56
260	899.46	5.19	4.67	0.101	2.137	1.83
265	898.13	5.06	4.55	0.100	2.146	2.13
270	896.81	4.94	4.43	0.099	2.156	2.40
275	895.49	4.82	4.32	0.099	2.166	2.67
280	894.17	4.71	4.21	0.098	2.175	2.98
285	892.85	4.60	4.11	0.097	2.185	3.33
290	891.53	4.50	4.01	0.097	2.195	3.72
295	890.21	4.40	3.91	0.096	2.205	4.16
300	888.88	4.30	3.82	0.095	2.214	4.62
305	887.56	4.21	3.74	0.094	2.224	5.19
310	886.24	4.12	3.65	0.094	2.234	5.94
315	884.92	4.04	3.57	0.093	2.244	6.85
320	883.60	3.95	3.49	0.092	2.254	8.68
325	882.28	3.88	3.42	0.091	2.263	11.85

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330	880.95	3.80	3.35	0.091	2.273	16.52
335	879.63	3.73	3.28	0.090	2.283	22.76
340	878.31	3.65	3.21	0.089	2.293	31.31
345	876.99	3.59	3.15	0.089	2.303	42.69

CALDERA
HEAT TRANSFER FLUIDS

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