

Caldera 2

High-Temperature Heat Transfer Fluid



CALDERA®
HEAT TRANSFER FLUIDS

Heat Transfer Fluids

Caldera 2 is a high-quality heat transfer fluid designed for systems that require a fluid with stability up to 630°F (332°C). The combination of high-quality base fluids and additives provides excellent resistance to oxidation and thermal degradation. With improved thermal capacity and conductivity, Caldera 2 can increase system performance by enhancing the heat transfer capability. It is ideal for a wide range of applications that require a long-lasting and clean running fluid.

Applications

- Closed and open loop systems with a maximum bulk temperature of 630°F (332°C)

Performance Advantages

- **Resistant against fluid degradation**
Contributes to long life at very high temperatures
- **Low varnishing tendencies**
Allows for clean operation and greater thermal transfer efficiency
- **Low volatility**
Improves safety and decreases possibility of pump cavitations
- **Easy disposal**
Can be disposed using mineral oil recycling services
- **Excellent temperature control**
- **Minimal odor**

Temperature Range



Typical Properties	Caldera 2
Minimum Temperature, °F (°C)	28 (-2)
Maximum Film Temperature, °F (°C)	669 (354)
Maximum Bulk Temperature, °F (°C)	630 (332)
Pour Point, °F (°C)	-0.4 (-18)
Flash Point, °F (°C)	444 (229)
Fire Point, °F (°C)	471 (244)
Autoignition Point, °F (°C)	694 (368)
Thermal Expansion Coefficient, %/°F	0.0562
Thermal Conductivity @ 100°F, BTU/h-ft-F	0.0829
Thermal Conductivity @ 500°F, BTU/h-ft-F	0.0760
Heat Capacity @ 100°F, BTU/lb-F	0.476
Heat Capacity @ 500°F, BTU/lb-F	0.651
Distillation Range (ASTM D2887), 10% °F	721
Distillation Range (ASTM D2887), 90% °F	921
Average Molecular Weight	395

Fluid properties are typical results and should not serve as a sole resource for determining the correct fluid for a particular application. Please consult an Isel representative to ensure that the product is the correct choice for the application. Revised 9/2018 - S

toll-free: 1-800-503-9533
phone: 904-378-3232

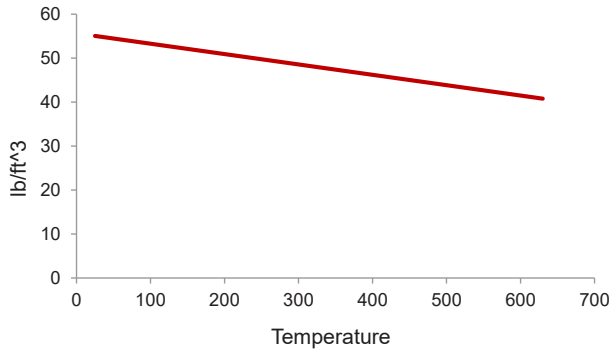
email: sales@iselinc.com
web: www.calderafluids.com

Caldera 2

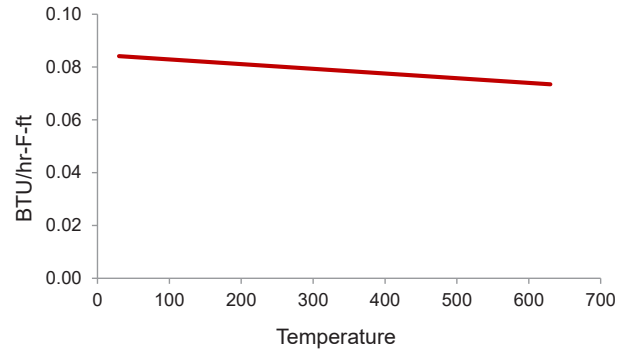
High-Temperature Heat Transfer Fluid



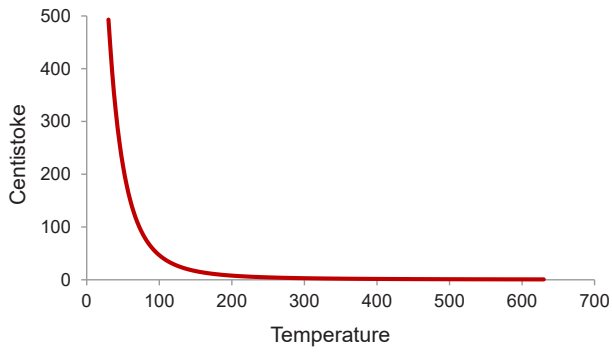
Density



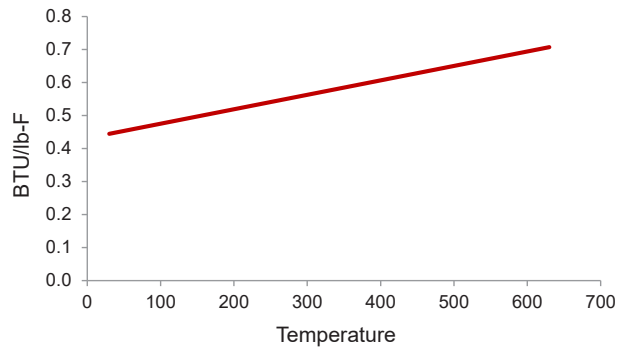
Thermal Conductivity



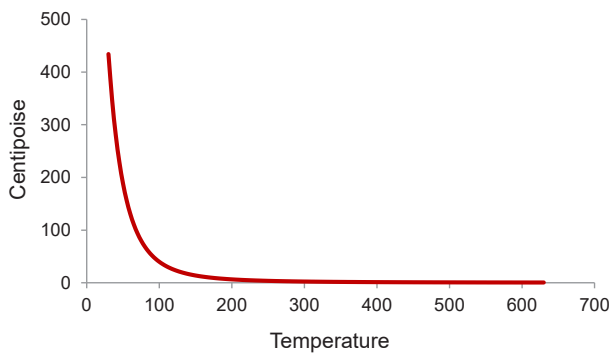
Kinematic Viscosity



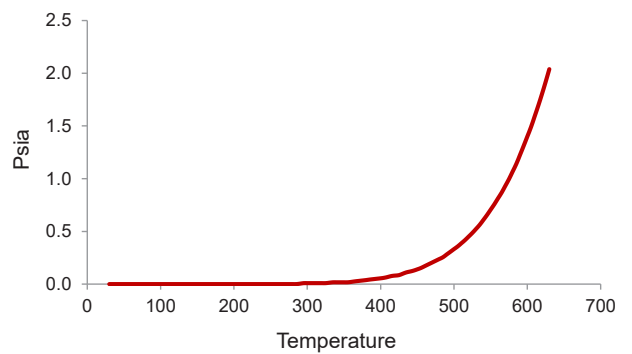
Heat Capacity



Dynamic Viscosity



Vapor Pressure



Fluid properties are typical results and should not serve as a sole resource for determining the correct fluid for a particular application. Please consult an Isel representative to ensure that the product is the correct choice for the application. Revised 9/2018 - S

Caldera 2



High-Temperature Heat Transfer Fluid

Temperature (°F)	Density (lb/ft ³)	Kinematic Viscosity (Centistoke)	Dynamic Viscosity (Centipoise)	Thermal Conductivity (BTU/hr-F-ft)	Heat Capacity (BTU/lb-F)	Vapor Pressure (Psia)
25	55.06	621.05	548.04	0.084	0.443	0.00
30	54.94	493.12	434.21	0.084	0.445	0.00
35	54.82	395.64	347.63	0.084	0.447	0.00
40	54.70	320.56	281.06	0.084	0.449	0.00
45	54.58	262.15	229.35	0.084	0.451	0.00
50	54.47	216.28	188.81	0.084	0.453	0.00
55	54.35	179.91	156.72	0.084	0.456	0.00
60	54.23	150.84	131.11	0.084	0.458	0.00
65	54.11	127.41	110.51	0.084	0.460	0.00
70	53.99	108.38	93.79	0.083	0.462	0.00
75	53.88	92.80	80.14	0.083	0.464	0.00
80	53.76	79.97	68.91	0.083	0.467	0.00
85	53.64	69.32	59.60	0.083	0.469	0.00
90	53.52	60.43	51.85	0.083	0.471	0.00
95	53.40	52.97	45.34	0.083	0.473	0.00
100	53.29	46.66	39.85	0.083	0.475	0.00
105	53.17	41.31	35.20	0.083	0.478	0.00
110	53.05	36.73	31.23	0.083	0.480	0.00
115	52.93	32.81	27.83	0.083	0.482	0.00
120	52.82	29.42	24.91	0.083	0.484	0.00
125	52.70	26.49	22.38	0.082	0.486	0.00
130	52.58	23.94	20.18	0.082	0.488	0.00
135	52.46	21.72	18.26	0.082	0.491	0.00
140	52.34	19.76	16.58	0.082	0.493	0.00
145	52.23	18.04	15.10	0.082	0.495	0.00
150	52.11	16.52	13.80	0.082	0.497	0.00
155	51.99	15.18	12.65	0.082	0.499	0.00
160	51.87	13.98	11.62	0.082	0.502	0.00
165	51.75	12.91	10.71	0.082	0.504	0.00
170	51.64	11.95	9.89	0.082	0.506	0.00
175	51.52	11.09	9.16	0.082	0.508	0.00
180	51.40	10.32	8.50	0.081	0.510	0.00
185	51.28	9.62	7.91	0.081	0.513	0.00
190	51.16	8.99	7.37	0.081	0.515	0.00
195	51.05	8.42	6.89	0.081	0.517	0.00
200	50.93	7.89	6.44	0.081	0.519	0.00
205	50.81	7.42	6.04	0.081	0.521	0.00
210	50.69	6.98	5.67	0.081	0.523	0.00

Fluid properties are typical results and should not serve as a sole resource for determining the correct fluid for a particular application. Please consult an Isel representative to ensure that the product is the correct choice for the application. Revised 9/2018 - S

Caldera 2



High-Temperature Heat Transfer Fluid

Temperature (°F)	Density (lb/ft ³)	Kinematic Viscosity (Centistoke)	Dynamic Viscosity (Centipoise)	Thermal Conductivity (BTU/hr-F-ft)	Heat Capacity (BTU/lb-F)	Vapor Pressure (Psia)
215	50.57	6.59	5.34	0.081	0.526	0.00
220	50.46	6.22	5.03	0.081	0.528	0.00
225	50.34	5.88	4.75	0.081	0.530	0.00
230	50.22	5.58	4.49	0.081	0.532	0.00
235	50.10	5.29	4.25	0.080	0.534	0.00
240	49.99	5.03	4.03	0.080	0.537	0.00
245	49.87	4.78	3.82	0.080	0.539	0.00
250	49.75	4.56	3.63	0.080	0.541	0.00
255	49.63	4.34	3.46	0.080	0.543	0.00
260	49.51	4.15	3.29	0.080	0.545	0.00
265	49.40	3.97	3.14	0.080	0.548	0.00
270	49.28	3.80	3.00	0.080	0.550	0.00
275	49.16	3.64	2.87	0.080	0.552	0.00
280	49.04	3.49	2.74	0.080	0.554	0.00
285	48.92	3.35	2.63	0.080	0.556	0.00
290	48.81	3.22	2.52	0.080	0.559	0.00
295	48.69	3.09	2.42	0.079	0.561	0.01
300	48.57	2.98	2.32	0.079	0.563	0.01
305	48.45	2.87	2.23	0.079	0.565	0.01
310	48.33	2.77	2.14	0.079	0.567	0.01
315	48.22	2.67	2.06	0.079	0.569	0.01
320	48.10	2.58	1.99	0.079	0.572	0.01
325	47.98	2.49	1.92	0.079	0.574	0.01
330	47.86	2.41	1.85	0.079	0.576	0.01
335	47.75	2.33	1.79	0.079	0.578	0.02
340	47.63	2.26	1.73	0.079	0.580	0.02
345	47.51	2.19	1.67	0.079	0.583	0.02
350	47.39	2.13	1.61	0.078	0.585	0.02
355	47.27	2.06	1.56	0.078	0.587	0.02
360	47.16	2.00	1.51	0.078	0.589	0.02
365	47.04	1.95	1.47	0.078	0.591	0.03
370	46.92	1.89	1.42	0.078	0.594	0.03
375	46.80	1.84	1.38	0.078	0.596	0.03
380	46.68	1.79	1.34	0.078	0.598	0.04
385	46.57	1.74	1.30	0.078	0.600	0.04
390	46.45	1.70	1.26	0.078	0.602	0.05
395	46.33	1.66	1.23	0.078	0.604	0.05
400	46.21	1.62	1.20	0.078	0.607	0.06

Fluid properties are typical results and should not serve as a sole resource for determining the correct fluid for a particular application. Please consult an Isel representative to ensure that the product is the correct choice for the application. Revised 9/2018 - S

Caldera 2



High-Temperature Heat Transfer Fluid

Temperature (°F)	Density (lb/ft ³)	Kinematic Viscosity (Centistoke)	Dynamic Viscosity (Centipoise)	Thermal Conductivity (BTU/hr-F-ft)	Heat Capacity (BTU/lb-F)	Vapor Pressure (Psia)
405	46.09	1.58	1.16	0.077	0.609	0.06
410	45.98	1.54	1.13	0.077	0.611	0.07
415	45.86	1.50	1.10	0.077	0.613	0.08
420	45.74	1.47	1.08	0.077	0.615	0.08
425	45.62	1.43	1.05	0.077	0.618	0.09
430	45.50	1.40	1.02	0.077	0.620	0.10
435	45.39	1.37	1.00	0.077	0.622	0.11
440	45.27	1.34	0.97	0.077	0.624	0.12
445	45.15	1.31	0.95	0.077	0.626	0.13
450	45.03	1.29	0.93	0.077	0.629	0.14
455	44.92	1.26	0.91	0.077	0.631	0.15
460	44.80	1.24	0.89	0.076	0.633	0.17
465	44.68	1.21	0.87	0.076	0.635	0.19
470	44.56	1.19	0.85	0.076	0.637	0.20
475	44.44	1.17	0.83	0.076	0.639	0.22
480	44.33	1.14	0.81	0.076	0.642	0.24
485	44.21	1.12	0.80	0.076	0.644	0.26
490	44.09	1.10	0.78	0.076	0.646	0.28
495	43.97	1.08	0.76	0.076	0.648	0.31
500	43.85	1.06	0.75	0.076	0.650	0.33
505	43.74	1.05	0.73	0.076	0.653	0.36
510	43.62	1.03	0.72	0.076	0.655	0.39
515	43.50	1.01	0.71	0.076	0.657	0.42
520	43.38	0.99	0.69	0.075	0.659	0.45
525	43.26	0.98	0.68	0.075	0.661	0.49
530	43.15	0.96	0.67	0.075	0.664	0.52
535	43.03	0.95	0.65	0.075	0.666	0.56
540	42.91	0.93	0.64	0.075	0.668	0.61
545	42.79	0.92	0.63	0.075	0.670	0.66
550	42.68	0.91	0.62	0.075	0.672	0.71
555	42.56	0.89	0.61	0.075	0.674	0.76
560	42.44	0.88	0.60	0.075	0.677	0.81
565	42.32	0.87	0.59	0.075	0.679	0.87
570	42.20	0.86	0.58	0.075	0.681	0.93
575	42.09	0.84	0.57	0.074	0.683	1.00
580	41.97	0.83	0.56	0.074	0.685	1.07
585	41.85	0.82	0.55	0.074	0.688	1.14
590	41.73	0.81	0.54	0.074	0.690	1.23

Fluid properties are typical results and should not serve as a sole resource for determining the correct fluid for a particular application. Please consult an Isel representative to ensure that the product is the correct choice for the application. Revised 9/2018 - S

Caldera 2



High-Temperature Heat Transfer Fluid

Temperature (°F)	Density (lb/ft ³)	Kinematic Viscosity (Centistoke)	Dynamic Viscosity (Centipoise)	Thermal Conductivity (BTU/hr-F-ft)	Heat Capacity (BTU/lb-F)	Vapor Pressure (Psia)
595	41.61	0.80	0.53	0.074	0.692	1.31
600	41.50	0.79	0.53	0.074	0.694	1.40
605	41.38	0.78	0.52	0.074	0.696	1.49
610	41.26	0.77	0.51	0.074	0.699	1.59
615	41.14	0.76	0.50	0.074	0.701	1.69
620	41.02	0.75	0.50	0.074	0.703	1.80
625	40.91	0.74	0.49	0.074	0.705	1.92
630	40.79	0.74	0.48	0.073	0.707	2.04



5266 Highway Avenue
Jacksonville, FL 32254
USA

toll-free: 1-800-503-9533
phone: 904-378-3232
fax: 904-378-9696

email: sales@iselinc.com
web: www.calderafluids.com

Fluid properties are typical results and should not serve as a sole resource for determining the correct fluid for a particular application. Please consult an Isel representative to ensure that the product is the correct choice for the application. Revised 9/2018 - S

All products manufactured in the USA