

# 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 332°C (630°F). 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 332°C (630°F)

### 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, °C (°F)	-2 (28)
Maximum Film Temperature, °C (°F)	354 (669)
Maximum Bulk Temperature, °C (°F)	332 (630)
Pour Point, °C (°F)	-18 (-0.4)
Flash Point, °C (°F)	229 (444)
Fire Point, °C (°F)	244 (471)
Autoignition Point, °C (°F)	368 (694)
Thermal Expansion Coefficient, %/°C	0.1012
Thermal Conductivity @ 38°C, W/m-K	0.143
Thermal Conductivity @ 260°C, W/m-K	0.131
Heat Capacity @ 38°C, kJ/kg-K	1.991
Heat Capacity @ 260°C, kJ/kg-K	2.724
Distillation Range (ASTM D2887), 10% °C	383
Distillation Range (ASTM D2887), 90% °C	494
Average Molecular Weight	395

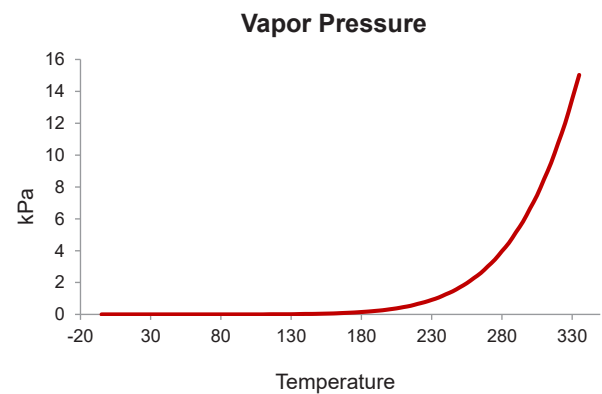
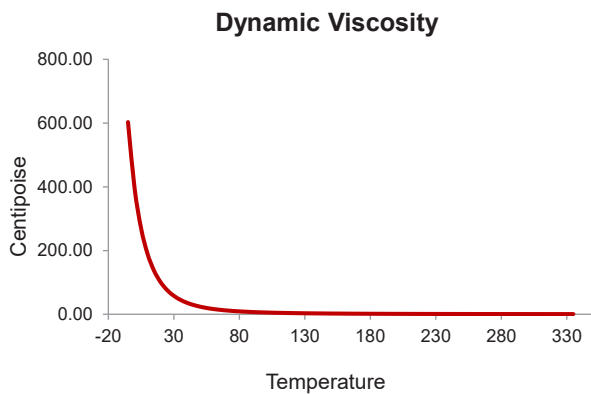
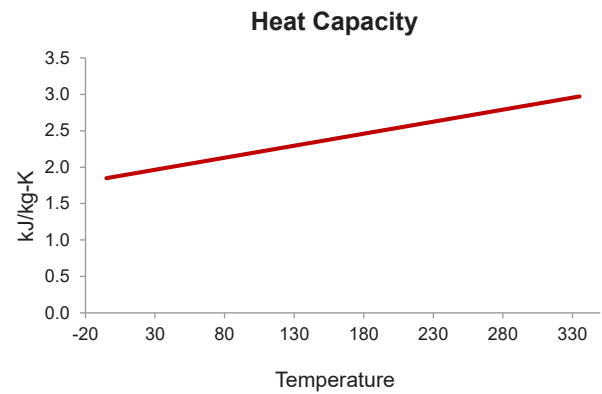
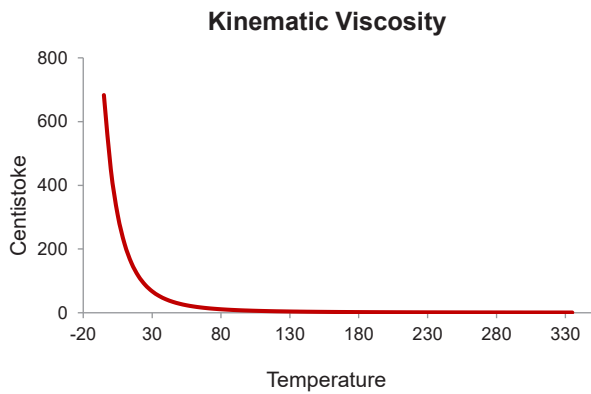
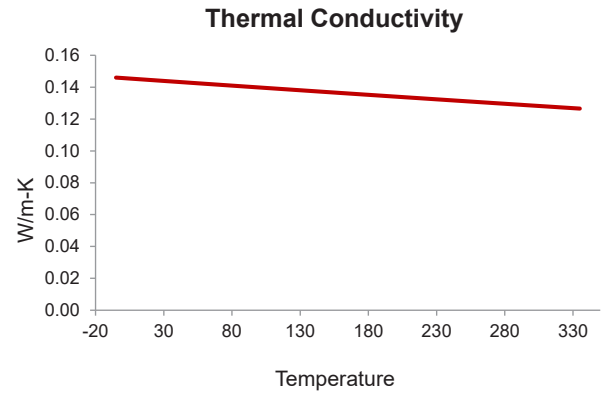
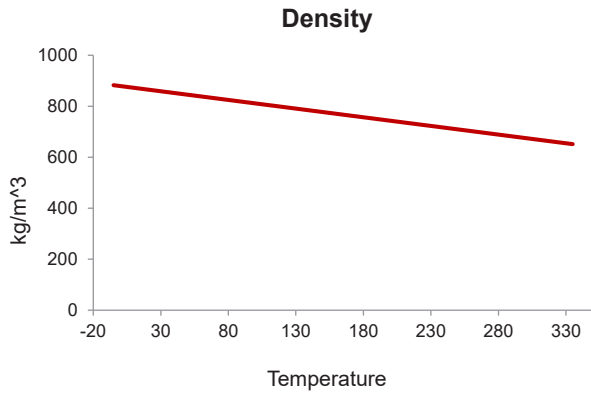
Fluid properties are typical results and should not serve as a sole resource for determining the correct fluid for a particular application. Please consult an Isel representative to ensure that the product is the correct choice for the application. Revised 9/2018 - M

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## High-Temperature Heat Transfer Fluid

Temperature (°C)	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)
-5	882.63	683.16	602.98	0.146	1.849	0.00
0	879.23	450.98	396.52	0.146	1.866	0.00
5	875.83	307.70	269.49	0.145	1.882	0.00
10	872.43	216.28	188.69	0.145	1.899	0.00
15	869.03	156.16	135.71	0.145	1.915	0.00
20	865.63	115.53	100.01	0.145	1.932	0.00
25	862.23	87.38	75.34	0.144	1.948	0.00
30	858.83	67.42	57.90	0.144	1.965	0.00
35	855.43	52.97	45.31	0.144	1.981	0.00
40	852.03	42.31	36.05	0.143	1.998	0.00
45	848.63	34.31	29.11	0.143	2.014	0.00
50	845.23	28.20	23.84	0.143	2.031	0.00
55	841.84	23.47	19.76	0.142	2.047	0.00
60	838.44	19.76	16.57	0.142	2.064	0.00
65	835.04	16.81	14.04	0.142	2.080	0.00
70	831.64	14.44	12.01	0.142	2.097	0.00
75	828.24	12.51	10.37	0.141	2.113	0.00
80	824.84	10.93	9.02	0.141	2.130	0.00
85	821.44	9.62	7.90	0.141	2.146	0.00
90	818.04	8.53	6.97	0.140	2.163	0.00
95	814.64	7.60	6.19	0.140	2.179	0.00
100	811.24	6.82	5.53	0.140	2.196	0.00
105	807.84	6.15	4.97	0.140	2.212	0.00
110	804.44	5.58	4.48	0.139	2.229	0.00
115	801.04	5.08	4.07	0.139	2.245	0.01
120	797.64	4.64	3.70	0.139	2.262	0.01
125	794.24	4.26	3.39	0.138	2.278	0.01
130	790.84	3.93	3.11	0.138	2.295	0.01
135	787.44	3.64	2.86	0.138	2.311	0.02
140	784.04	3.38	2.65	0.137	2.328	0.03
145	780.64	3.14	2.45	0.137	2.344	0.03
150	777.24	2.93	2.28	0.137	2.361	0.04
155	773.84	2.75	2.13	0.137	2.377	0.05
160	770.44	2.58	1.99	0.136	2.394	0.06
165	767.04	2.43	1.86	0.136	2.410	0.08
170	763.64	2.29	1.75	0.136	2.427	0.10
175	760.24	2.16	1.65	0.135	2.443	0.12
180	756.85	2.05	1.55	0.135	2.460	0.15

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185	753.45	1.95	1.47	0.135	2.476	0.18
190	750.05	1.85	1.39	0.135	2.493	0.22
195	746.65	1.76	1.32	0.134	2.509	0.26
200	743.25	1.68	1.25	0.134	2.526	0.32
205	739.85	1.61	1.19	0.134	2.542	0.38
210	736.45	1.54	1.13	0.133	2.559	0.46
215	733.05	1.47	1.08	0.133	2.575	0.54
220	729.65	1.42	1.03	0.133	2.592	0.66
225	726.25	1.36	0.99	0.133	2.608	0.77
230	722.85	1.31	0.95	0.132	2.625	0.91
235	719.45	1.26	0.91	0.132	2.641	1.06
240	716.05	1.22	0.87	0.132	2.658	1.26
245	712.65	1.17	0.84	0.132	2.674	1.45
250	709.25	1.14	0.81	0.131	2.691	1.70
255	705.85	1.10	0.78	0.131	2.707	1.96
260	702.45	1.06	0.75	0.131	2.724	2.28
265	699.05	1.03	0.72	0.130	2.740	2.60
270	695.65	1.00	0.70	0.130	2.757	3.02
275	692.25	0.97	0.67	0.130	2.773	3.44
280	688.85	0.95	0.65	0.130	2.790	3.97
285	685.45	0.92	0.63	0.129	2.806	4.49
290	682.05	0.90	0.61	0.129	2.823	5.16
295	678.65	0.87	0.59	0.129	2.839	5.82
300	675.25	0.85	0.57	0.128	2.856	6.65
305	671.86	0.83	0.56	0.128	2.872	7.47
310	668.46	0.81	0.54	0.128	2.889	8.49
315	665.06	0.79	0.53	0.128	2.905	9.51
320	661.66	0.78	0.51	0.127	2.922	10.75
325	658.26	0.76	0.50	0.127	2.938	12.00
330	654.86	0.74	0.49	0.127	2.955	13.51
335	651.46	0.73	0.47	0.127	2.971	15.03



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All products manufactured in the USA