

Caldera 19

Food-Grade Low-Temperature
Heat Transfer Fluid & Cleaner



CALDERA[®]
HEAT TRANSFER FLUIDS

Heat Transfer Fluids

Caldera 19 is a long-lasting food-grade heat transfer fluid and cleaner. It is designed to soften, dissolve, and suspend carbon and varnish deposits within low-temperature heat transfer systems that require a food-grade formulation. This unique formulation can help to restore system performance and efficiency by removing insulating fouling. It is fully-formulated to completely replace an existing fluid, and can be used at temperatures up to 232°C (450°F).

Caldera 19 is an ideal solution for preventative maintenance or for cleaning systems that are experiencing minor varnish or carbon deposits.

Applications

- Low-temperature food-grade systems
- System cleaner for fouled systems
- Closed and open loop systems with a maximum bulk temperature of 232°C (450°F)

Performance Advantages

- **Meets HT-1 requirements**
Ideal for food-processing applications
- **Cleans fouled systems**
System can remain in operation during cleaning
- **Continuous cleaner**
Ideal for systems experiencing minor varnishing
- **Odorless**

Temperature Range



Typical Properties	Caldera 19
Minimum Temperature, °C (°F)	-40 (-40)
Maximum Film Temperature, °C (°F)	254 (489)
Maximum Bulk Temperature, °C (°F)	232 (450)
Pour Point, °C (°F)	-45 (-49)
Flash Point, °C (°F)	140 (284)
Fire Point, °C (°F)	155 (311)
Autoignition Point, °C (°F)	315 (599)
Thermal Expansion Coefficient, %/°C	0.0861
Thermal Conductivity @ 38°C, W/m-K	0.139
Heat Capacity @ 38°C, kJ/kg-K	2.084
Distillation Range (ASTM D2887), 10% °C	265
Distillation Range (ASTM D2887), 90% °C	505
Average Molecular Weight	372

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

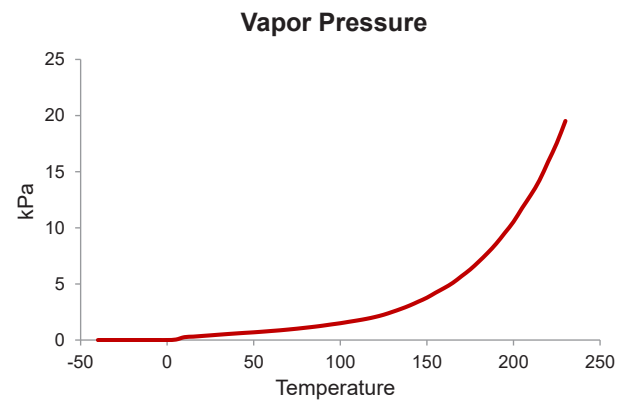
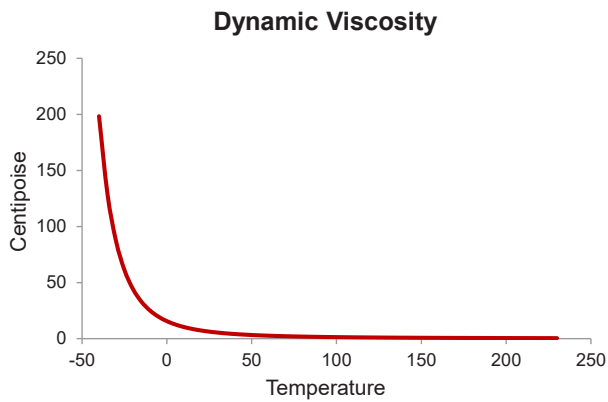
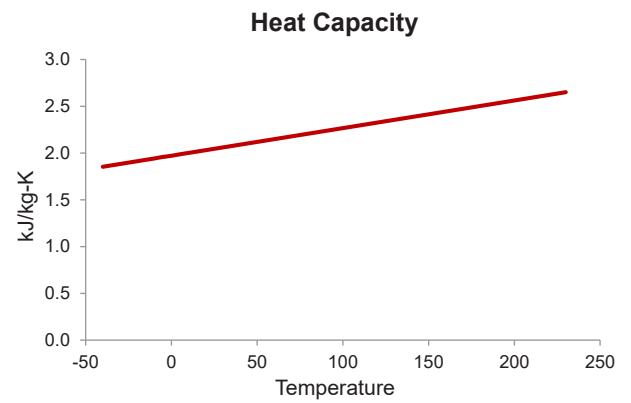
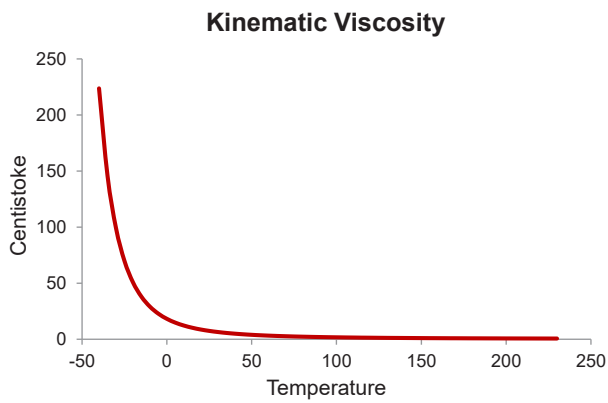
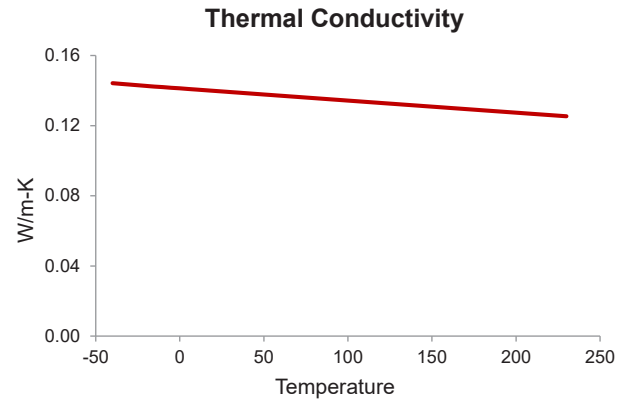
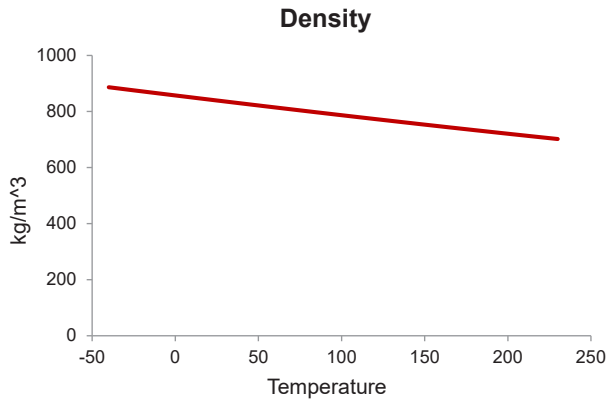
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Temperature (°C)	Density (kg/m ³)	Kinematic Viscosity (Centistoke)	Dynamic Viscosity (Centipoise)	Thermal Conductivity (W/m-K)	Heat Capacity (kJ/kg-K)	Vapor Pressure (kPa)
-40	886.54	223.73	198.35	0.144	1.853	0.00
-35	882.87	145.92	128.83	0.144	1.868	0.00
-30	879.20	99.14	87.16	0.143	1.883	0.00
-25	875.54	69.81	61.12	0.143	1.898	0.00
-20	871.88	50.75	44.24	0.143	1.912	0.00
-15	868.23	37.93	32.94	0.142	1.927	0.00
-10	864.59	29.07	25.13	0.142	1.942	0.00
-5	860.96	22.77	19.61	0.142	1.958	0.00
0	857.34	18.20	15.60	0.141	1.971	0.00
5	853.73	14.79	12.63	0.141	1.987	0.04
10	850.12	12.22	10.39	0.141	2.001	0.26
15	846.52	10.23	8.66	0.140	2.016	0.30
20	842.93	8.68	7.31	0.140	2.031	0.36
25	839.35	7.44	6.25	0.140	2.045	0.42
30	835.78	6.45	5.39	0.139	2.060	0.48
35	832.22	5.64	4.69	0.139	2.075	0.54
40	828.67	4.97	4.12	0.138	2.089	0.59
45	825.13	4.42	3.65	0.138	2.104	0.64
50	821.60	3.95	3.25	0.138	2.119	0.69
55	818.07	3.56	2.91	0.137	2.134	0.74
60	814.56	3.23	2.63	0.137	2.148	0.81
65	811.06	2.94	2.38	0.137	2.163	0.87
70	807.57	2.69	2.17	0.136	2.178	0.94
75	804.09	2.47	1.99	0.136	2.193	1.01
80	800.62	2.28	1.83	0.136	2.207	1.10
85	797.16	2.11	1.69	0.135	2.222	1.19
90	793.71	1.97	1.56	0.135	2.237	1.28
95	790.27	1.84	1.45	0.135	2.252	1.40
100	786.84	1.72	1.35	0.134	2.266	1.50
105	783.43	1.62	1.27	0.134	2.281	1.63
110	780.02	1.52	1.19	0.134	2.296	1.75
115	776.63	1.44	1.12	0.133	2.311	1.89
120	773.24	1.36	1.05	0.133	2.325	2.05
125	769.87	1.29	0.99	0.133	2.340	2.25
130	766.51	1.23	0.94	0.132	2.355	2.51
135	763.17	1.17	0.89	0.132	2.370	2.78
140	759.83	1.12	0.85	0.132	2.384	3.07
145	756.51	1.07	0.81	0.131	2.399	3.42

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150	753.19	1.02	0.77	0.131	2.414	3.77
155	749.89	0.98	0.74	0.130	2.429	4.22
160	746.60	0.95	0.71	0.130	2.444	4.63
165	743.33	0.91	0.68	0.130	2.458	5.10
170	740.06	0.88	0.65	0.129	2.473	5.69
175	736.81	0.85	0.63	0.129	2.488	6.29
180	733.57	0.82	0.60	0.129	2.503	6.99
185	730.34	0.79	0.58	0.128	2.517	7.75
190	727.13	0.77	0.56	0.128	2.532	8.58
195	723.92	0.75	0.54	0.128	2.547	9.55
200	720.73	0.73	0.52	0.127	2.562	10.54
205	717.56	0.71	0.51	0.127	2.577	11.76
210	714.39	0.69	0.49	0.127	2.591	12.92
215	711.24	0.67	0.48	0.126	2.606	14.23
220	708.10	0.65	0.46	0.126	2.621	15.89
225	704.97	0.64	0.45	0.126	2.636	17.55
230	701.85	0.62	0.44	0.125	2.651	19.52



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All products manufactured in the USA