

The background of the entire page is a blue-toned image of a molecular structure, possibly a protein or a complex polymer, with various spheres and connecting rods. The top of the page has a white curved banner. The logo 'sigma THERM® - C' is positioned in the upper right of this banner. The word 'sigma' is in blue, 'THERM' is in green, and '- C' is in green. Below the logo, the temperature range '(-30) °C TO 330 °C' is written in black. Further down and to the right, the text 'Single Fluid for Heating and Cooling' is written in a smaller black font. At the bottom left, the website 'www.sigma-therm.com' is displayed in black. There are decorative dotted patterns in the corners of the white banner.

sigma THERM® - C

(-30) °C TO 330 °C

Single Fluid for
Heating and Cooling

Description:

sigma THERM® - C is a Heat Transfer Fluid based on Alkylated Aromatic, used in Single Fluid Heating and Cooling applications.

Application :

Indirect closed heat transfer systems : (-30) °C to 330 °C

Without pressurization : up to 265 °C

With proper pressurization : up to 330°C.

This single fluid caters the dual demand heating and cooling in Pharmaceutical, Fine Chemicals and other industries.

Benefits :

- Simplifies by eliminating multiple fluids for heating and cooling.
- Engineered for Longevity and lasting performance.
- Cost optimised Solution for maximum value.
- Effortless operations with minimum maintenance.
- It serves as a superior alternative to conventional dual steam & glycol or steam & brine systems.

Compatibility :

Gasket Material : **sigma THERM® - C** has an acceptable compatibility when used within the temperature and pressure limitation of the following polymers or gasketing materials:

Acetal, Aramid Fiber, Chemraz (FFKM), Epoxy, Fluorocarbon (FILM), Fluoroelastomer, Glass Fiber, Gylon, Kalrez, PEEK, PTFE, Teflon (All) , PTFE Silicon, PTFE Viton, PTFE Fiberglass, Kel-F (CTFE), Viton

Metal : **sigma THERM® - C** is compatible with all metals.

Typical Properties :

Composition	Alkylated Aromatics
Max. Bulk Temperature, °C	330
Max. Film Temperature, °C	380
Kin. Vis. @ 40 °C, cSt	2.7
Pour Point , °C	< (-70)
Crystallizing Point, °C	(-30)
Density @ 20 °C g/cm ³	0.99 - 1
Auto Ignition Temp. °C	478
Normal Boiling Point °C	278
Flash Point °C	< 130
Acid Value, mg KOH/g	< 0.01
Moisture Content	< 200 ppm

Packing :

200 Kgs

Temperature	Density	Specific Heat	Thermal Conductivity	Kinematic Viscosity	Vapour Pressure
°C	Kg/m ³	kJ/Kg °K	W/m·K	cSt	kPa
-30	1035	1.444	0.1377	26.7	-
-20	1028	1.485	0.1367	16.8	-
-10	1021	1.525	0.1357	11.3	-
0	1013	1.555	0.1347	7.91	-
10	1006	1.596	0.1337	5.79	-
20	999	1.626	0.1327	4.40	-
30	991	1.656	0.1307	3.44	-
40	984	1.697	0.1296	2.75	-
50	976	1.727	0.1286	2.26	0.01
60	969	1.768	0.1276	1.88	0.02
70	961	1.798	0.1266	1.60	0.04
80	954	1.838	0.1256	1.39	0.07
90	946	1.869	0.1246	1.21	0.13
100	939	1.899	0.1226	1.07	0.22
110	931	1.939	0.1216	0.95	0.37
120	923	1.970	0.1206	0.86	0.59
130	916	2.010	0.1196	0.78	0.95
140	908	2.040	0.1186	0.71	1.47
150	900	2.071	0.1176	0.65	2.22
160	892	2.111	0.1166	0.60	3.28
170	884	2.141	0.1146	0.56	4.75
180	876	2.172	0.1136	0.52	6.76
190	867	2.212	0.1126	0.50	9.45
200	859	2.242	0.1116	0.47	13.0
210	851	2.273	0.1106	0.45	17.6
220	842	2.313	0.1095	0.42	23.6
230	833	2.343	0.1075	0.40	31.1
240	824	2.374	0.1065	0.38	40.6
250	815	2.404	0.1055	0.37	52.3
260	806	2.444	0.1045	0.35	66.6
270	797	2.475	0.1035	0.34	84.2
280	788	2.505	0.1025	0.33	105
290	778	2.545	0.1005	0.31	131
300	769	2.576	0.0995	0.30	160
310	759	2.616	0.0985	0.29	196
320	749	2.646	0.0975	0.29	237
330	738	2.677	0.0965	0.28	285
340	728	2.717	0.0955	0.27	341
350	717	2.747	0.0935	0.26	404
360	705	2.788	0.0925	0.26	476

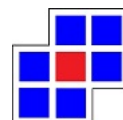
Note : Above data is for reference only

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Temperature	Vapour Density	Vapour Specific Heat	Vapour Thermal Conductivity	Vapour Dynamic Viscosity	Vapour Kinematic Viscosity
°C	Kg/m ³	kJ/Kg °K	W/m·K	cP(mPa.s)	cSt
0	0.00001	0.925	0.0118	0.0055	-
10	0.00002	0.964	0.0121	0.0057	-
20	0.00005	1.001	0.0124	0.0059	-
30	0.00012	1.041	0.0127	0.0061	-
40	0.00028	1.081	0.0131	0.0063	-
50	0.00060	1.121	0.0134	0.0065	-
60	0.00122	1.151	0.0138	0.0067	5467
70	0.00234	1.191	0.0141	0.0069	2934
80	0.00429	1.231	0.0145	0.0071	1647
90	0.00757	1.261	0.0149	0.0073	962
100	0.01281	1.301	0.0153	0.0075	582
110	0.0211	1.341	0.0158	0.0077	364
120	0.0336	1.371	0.0162	0.0079	235
130	0.0522	1.411	0.0166	0.0081	155
140	0.0788	1.441	0.0172	0.0083	105
150	0.116	1.471	0.0177	0.0085	73.2
160	0.168	1.512	0.0181	0.0088	51.8
170	0.238	1.542	0.0186	0.0090	37.5
180	0.331	1.572	0.0191	0.0092	27.6
190	0.454	1.602	0.0197	0.0094	20.6
200	0.613	1.642	0.0202	0.0096	15.6
210	0.814	1.672	0.0207	0.0098	11.9
220	1.07	1.702	0.0213	0.0100	9.33
230	1.38	1.732	0.0219	0.0101	7.35
240	1.77	1.762	0.0224	0.0103	5.85
250	2.25	1.792	0.0230	0.0105	4.71
260	2.82	1.812	0.0236	0.0107	3.83
270	3.51	1.842	0.0242	0.0109	3.13
280	4.33	1.872	0.0249	0.0112	2.59
290	5.31	1.902	0.0255	0.0114	2.15
300	6.44	1.922	0.0261	0.0116	1.80
310	7.77	1.952	0.0268	0.0118	1.52
320	9.32	1.972	0.0275	0.0120	1.29
330	11.1	2.002	0.0283	0.0122	1.10
340	13.2	2.022	0.0290	0.0124	0.94
350	15.5	2.042	0.0297	0.0126	0.81
360	18.3	2.072	0.0304	0.0128	0.70
370	21.4	2.092	0.0311	0.0130	0.61

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