

**sigma THERM® - Y**

**(-90) °C TO 300 °C**

Single Fluid for  
Heating and Cooling



**Description:**

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

**Application :**

Indirect closed heat transfer systems : (- 90) °C to 300 °C  
 Without pressurization : up to 140 °C  
 With proper pressurization : up to 300°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® - Y 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® - Y is compatible with all metals.

**Typical Properties :**

Composition	Synthetic Aromatic
Appearance	Water White
Max. Bulk Temperature, °C	300
Max. Film Temperature, °C	320
Kin. Vis. @ 40 °C, cSt	0.6
Pour Point, °C	(-)96
Specific Gravity @ 20 °C	0.86
Auto Ignition Temp. °C (DIN 51794)	420
Boiling Point °C	153
Flash Point °C	35

**Packing :**

210 Ltrs

Temperature	Density	Specific Heat	Thermal Conductivity	Kinematic Viscosity	Vapour Pressure
°C	Kg/m <sup>3</sup>	kJ/Kg °K	W/m·K	cSt	kPa
-90	945	1.286	0.156	9.08	
-80	937	1.327	0.153	6.63	
-70	929	1.367	0.150	5.01	
-60	921	1.407	0.148	3.88	
-50	913	1.447	0.145	3.08	
-40	905	1.487	0.143	2.49	
-30	897	1.528	0.141	2.06	
-20	890	1.578	0.138	1.72	
-10	882	1.618	0.136	1.47	
0	874	1.658	0.134	1.27	
10	865	1.698	0.131	1.10	0.22
20	857	1.739	0.129	0.97	0.44
30	849	1.779	0.127	0.86	0.82
40	840	1.829	0.124	0.77	1.45
50	832	1.869	0.122	0.70	2.47
60	823	1.910	0.120	0.63	4.01
70	815	1.950	0.118	0.58	6.31
80	806	1.990	0.115	0.53	9.6
90	797	2.040	0.113	0.49	14.2
100	788	2.080	0.111	0.46	20.6
110	779	2.121	0.109	0.43	29.1
120	770	2.161	0.106	0.40	40.1
130	760	2.211	0.104	0.38	54.3
140	751	2.251	0.102	0.36	72.3
150	741	2.291	0.099	0.34	94.7
160	731	2.342	0.097	0.32	122
170	721	2.382	0.095	0.31	156
180	711	2.432	0.093	0.30	196
190	700	2.472	0.091	0.29	244
200	690	2.523	0.088	0.27	299
210	679	2.573	0.086	0.27	365
220	667	2.623	0.084	0.26	441
230	655	2.673	0.082	0.25	527
240	642	2.724	0.079	0.24	627
250	629	2.774	0.077	0.24	738
260	615	2.834	0.075	0.23	864
270	601	2.904	0.073	0.23	1004
280	585	2.985	0.071	0.23	1159
290	569	3.075	0.068	0.23	1331
300	551	3.186	0.066	0.23	1520

Note : Above data is for reference only

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