

The background of the entire page is a blue-tinted image of a complex molecular or crystalline structure, possibly a protein or a specific material lattice, rendered in a semi-transparent, glowing style. The structure consists of numerous interconnected spheres and rods, creating a dense, three-dimensional network. The lighting is soft and diffused, highlighting the geometric forms and creating a sense of depth and scientific precision. The overall color palette is dominated by various shades of blue, from light sky blue to deep, dark navy blue, which conveys a sense of technology, science, and reliability.

**sigma** THERM® - N

**(-50) °C TO 280 °C**

Single Fluid for  
Heating and Cooling

**Description:**

sigma THERM<sup>®</sup> - N is a Heat Transfer Fluid based on Alkylated Aromatic, used in Single Fluid Heating and Cooling applications.

**Application :**

Indirect closed heat transfer systems : (- 50) °C to 280 °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<sup>®</sup> - N 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<sup>®</sup> - N is compatible with all metals.

**Typical Properties :**

Composition	100 % Synthetic
Appearance	Clear colorless to Light Yellow liquid
Kin. Vis. @ 40 °C	4 ± 0.4 cSt
Max. Bulk Temperature	280 °C
Max. Film Temperature	300 °C
Pour Point	Well Below (-70) °C
Specific Gravity @ 20 °C	0.86
Auto Ignition Temp.	Above 325 °C
Normal Boiling Point	294 °C
Flash Point	140 °C
Moisture Content	Below 150 ppm
Coefficient of Thermal Expansion	0.00107/ °C

**Packing :**

210 Ltrs, 35 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
-50	909	1.64	0.134	500	-
-40	902	1.68	0.132	214	-
-30	895	1.72	0.131	90.2	-
-20	888	1.76	0.130	43.4	-
-10	881	1.80	0.129	24.1	-
0	875	1.84	0.127	15.3	-
10	868	1.88	0.126	10.2	-
20	861	1.91	0.125	7.31	-
30	854	1.95	0.124	5.10	-
40	847	1.99	0.122	3.99	-
50	840	2.03	0.121	3.14	-
60	833	2.07	0.120	2.54	-
70	826	2.10	0.118	2.11	-
80	819	2.14	0.117	1.78	-
90	812	2.18	0.116	1.54	-
100	805	2.21	0.114	1.35	-
110	798	2.25	0.113	1.21	-
120	791	2.29	0.111	1.07	-
130	784	2.32	0.110	0.96	-
140	776	2.36	0.109	0.87	1
150	769	2.39	0.107	0.79	2
160	762	2.42	0.106	0.73	2
170	754	2.46	0.104	0.67	3
180	747	2.49	0.103	0.62	4
190	739	2.54	0.101	0.58	6
200	731	2.57	0.098	0.54	8
210	723	2.60	0.097	0.50	12
220	715	2.63	0.095	0.48	16
230	707	2.67	0.094	0.46	21
240	697	2.70	0.092	0.42	28
250	689	2.73	0.090	0.39	37
260	680	2.76	0.088	0.38	47
270	671	2.79	0.087	0.36	59
280	662	2.82	0.085	0.34	74

Note : Above data is for reference only

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