sigma THERM® - S

(-80) °C TO 300 °C

Single Fluid for
Heating and Cooling

www.sigma-therm.com

Description:

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

Application :

Indirect closed heat transfer systems : (– 80) °C to 300 °C
Without pressurization : up to 170 °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®- S 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®- S is compatible with all metals.

Typical Properties :

Composition	Alkylated Aromatics
Appearance	Clear to Light Yellow
Max. Bulk Temperature, °C	300
Max. Film Temperature, °C	320
Kin. Vis. @ 40 °C, cSt	0.81
Pour Point , °C	< (-81)
Specific Gravity @ 20 °C	0.86
Auto Ignition Temp. °C	410
Initial Boiling Point °C	> 180
Flash Point °C	> 60
Moisture Content	< 80 ppm

Packing :

210 Ltrs, 35 Ltrs

Temperature	Density	Specific Heat	Thermal Conductivity	Kinematic Viscosity	Vapour Pressure
°C	Kg/m³	kJ/Kg °K	W/m·K	cSt	kPa
-80	940	1.543	0.151	10.58	-
-70	932	1.575	0.148	8.94	-
-60	924	1.606	0.146	5.82	-
-50	916	1.637	0.144	4.09	-
-40	908	1.669	0.142	3.05	-
-30	900	1.700	0.139	2.37	-
-20	892	1.732	0.137	1.91	-
-10	884	1.763	0.135	1.58	-
0	876	1.794	0.133	1.33	-
10	868	1.826	0.130	1.16	-
20	860	1.857	0.128	1.01	0.10
30	852	1.889	0.126	0.89	0.19
40	844	1.920	0.124	0.81	0.38
50	836	1.951	0.121	0.72	0.67
60	828	1.983	0.119	0.65	1.14
70	819	2.014	0.117	0.60	1.81
80	811	2.046	0.115	0.55	2.95
90	803	2.077	0.112	0.51	4.5
100	795	2.108	0.110	0.47	6.8
110	787	2.140	0.108	0.44	10.0
120	779	2.171	0.106	0.41	14.5
130	771	2.203	0.103	0.38	20.6
140	763	2.234	0.101	0.36	28.8
150	755	2.265	0.099	0.34	39.4
160	747	2.297	0.096	0.32	53.3
170	739	2.328	0.094	0.31	71.1
180	731	2.360	0.092	0.29	93.5
190	723	2.391	0.090	0.28	122
200	715	2.422	0.087	0.27	156
210	707	2.454	0.085	0.26	199
220	699	2.485	0.083	0.24	249
230	691	2.517	0.081	0.24	311
240	683	2.548	0.078	0.23	384
250	675	2.579	0.076	0.22	470
260	667	2.611	0.074	0.21	571
270	659	2.642	0.072	0.21	689
280	651	2.674	0.069	0.20	826
290	643	2.705	0.067	0.20	979
300	635	2.736	0.065	0.19	1159

Note : Above data is for reference only

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