

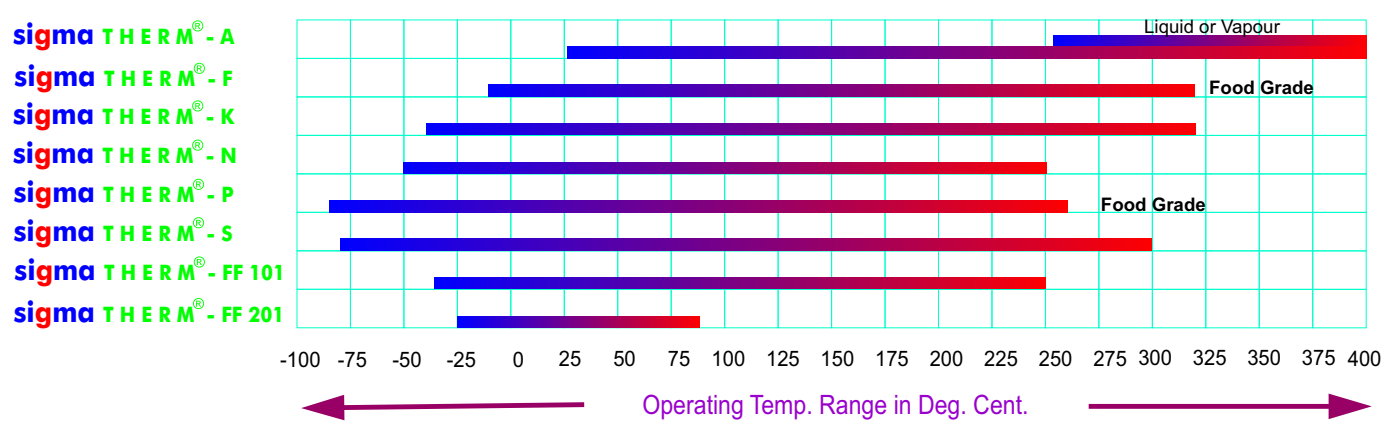
# Ultra High Temperature Vapour / Liquid Phase Heat Transfer Fluid

up to **400 °C**

**sigma THERM<sup>®</sup> - A**

*Synthetic Thermic Fluid*

Thermic Fluid and other Speciality Range

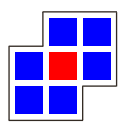


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# Ultra High Temperature Liquid/Vapor phase Heat Transfer Fluid

**sigma THERM® - A**

Extended Life Thermic Fluid

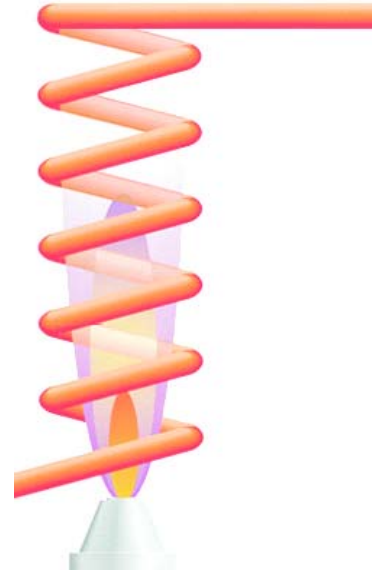
## Description :

**sigma THERM® - A** is a thermally stable pure heat transfer fluid which offer you excellent heat transfer capabilities in both liquid and vapor phase up to 400°C . This highly stable heat transfer fluid has an application temperature range of 27°C to 258°C as a liquid and 258°C to 400°C as a vapor.

In addition it's cost-effective! **sigma THERM® - A** is thermally more stable thermic fluid than general thermic fluids available in market. However, we provide **sigma THERM® - A** at a price that's designed to make it the ideal choice for your liquid or vapor phase heating systems.

**sigma THERM® - A** also is non-corrosive to metals and is chemically stable. Finally, in keeping with our commitment to the environment, **sigma THERM® - A** can be fully reprocessed.

**sigma THERM® - A** can also be used for top up / make up for the system containing other similar fluids.



## Typical Properties :

Appearance	Colourless Solid or Liquid
Specific Gravity@ 25 ° C	1.07
Solidification point, min ° C	26
Max. Temperature, ° C	400
Max. Film Temperature, ° C	410
Kin. Vis. @ 40°C, cSt	2.6
Auto Ignition Temp. ° C	616
Initial Boiling Point °C at 1.013 bar	257
Flash Point °C	115
Fire Point °C	120
Mean Specific Heat ( kJ/kg °K ) @ 60 °C	1.6
Moisture content, ppm	< 300
Neutralization number (mg KOH/g )	0.01
Thermal conductivity (W/m °K ) @ 60 °C	0.14
Coefficient of thermal expansion ( K <sup>-1</sup> ) @ 300°C	10.6 x 10 <sup>-4</sup>

**Packing :** 220 Kgs

Saturated Liquid Properties

Temp.	Vapor Pressure	Viscosity	Specific Heat	Thermal Cond.	Density
°C	Bar	mPa.sec	kJ/kg K	W/mK	kg/m3
65	0.00	1.60	1.649	0.136	1036
105	0.01	0.92	1.759	0.130	1003
155	0.06	0.57	1.895	0.121	960
205	0.28	0.38	2.030	0.113	914
255	0.98	0.27	2.164	0.105	865
305	2.63	0.20	2.301	0.096	811
355	5.86	0.16	2.451	0.088	752
405	11.43	0.12	2.643	0.080	681

Saturated Vapour Properties

Temp.	Vapor Pressure	Liquid Enthalpy	Latent Heat	Vapor Enthalpy	Vapor Density	Vapor Viscosity	Vapor Thermal Cond.	Specific Heat
°C	bar	kJ/kg	kJ/kg	kJ/kg	kg/m3	mPa•s	W/mK	kJ/kg K
65	0.00	89.9	373.3	478.5	0.00	0.0066	0.011	1.19
105	0.01	161.3	355.4	531.3	0.03	0.0074	0.013	1.33
155	0.06	256.2	334.7	604.6	0.26	0.0083	0.017	1.48
205	0.28	358.2	313.8	684.9	1.19	0.0094	0.021	1.63
255	0.98	467.4	291.5	770.7	3.88	0.0104	0.025	1.77
305	2.63	583.6	266.1	860.5	10.02	0.0114	0.029	1.92
355	5.86	707.0	235.8	952.5	22.31	0.0127	0.033	2.07
405	11.43	838.4	197.7	1044.2	45.73	0.0144	0.038	2.26

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