



## **HYTHERM S**

### **SPECIAL FEATURES**

Hytherm S is a premium quality Heat Transfer Oil specifically developed for heat transfer system where skin temperature go upto 345 °C and bulk temperatures upto 320 °C. This product is derived from synthetic base stocks and is fortified with high performance additives to enhance the performance at higher temperature.

The salient features are given below:

Ability to withstand higher bulk operating temperatures upto 320°C.

Reduced oxidation and improved thermal degradation, hence longer life.

Reduced tendency of thermal cracking and hence lower drop in flash point as compared to mineral oil.

### **APPLICATION AREAS**

Hytherm S gives excellent performance in high temperature Heat Transfer. When provided with proper nitrogen blanketing this fluid can perform well and resist thermal cracking over a period of time leading to lower drop in flash point as compared to mineral oils. This is an excellent heat transfer fluid and finds a wide range of applications in Textile, Pharmaceutical, Chemical and processing units.

### **PHYSICO CHEMICAL PROPERTIES**

Appearance	Clear & bright
Max. Film temperature, °C	345
Pour point, °C	-45
Flash point, °C	204
Fire point, °C	224
Autoignition temp; °C	426
Copper corrosion	1
Total acid no; mgKOH/g	0.02
Boiling range, °C Initial ( IBP )	350
Final ( FBP)	400
Ash, %wt	0.005
CCR, %wt	0.07
RBOT oxidation life in minutes	> 500



Temp, °C →	50	100	150	200	240	250	260	270	280	290	300
Sp.Heat, Btu/Lb/ °F	0.478	0.526	0.574	0.634	0.672	0.682	0.692	0.703	0.715	0.728	0.741
Sp. Gravity	0.858	0.825	0.792	0.758	0.741	0.724	0.717	0.711	0.704	0.698	0.691
Kin. Viscosity, cSt	25.52	4.34	1.96	1.52							
Vapour pressure; mm Hg	0.45 x 10 <sup>-3</sup>	0.03	0.72	8		50					240
Thermal conductivity, Btu / Hr / ft °F	0.089	0.083	0.079	0.073	0.069	0.068	0.067	0.066	0.065	0.065	0.064

## PANEL COKER PERFORMANCE TEST

(For evaluation of Thermal Stability of Heat Transfer Fluids)

### TEST CONDITIONS

Panel Temperature, °	250	275	300	325	350
Sump Temperature, °	121	121	121	121	121
Duration, hrs	4	4	4	4	4
Run/Bake Cycle, min	2.2/0.8	2.2/0.8	2.2/0.8	2.2/0.8	2.2/0.8
Nitrogen flow rate, lt/min	0.3	0.3	0.3	0.3	0.3
Sump Capacity, gms	233	233	233	233	233

### RESULTS

Hytherm S	0.00	0.00	1.3	2.7	18.9
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