MANTHERM K1

Fully synthetic high temperature heat transfer fluid

Introduction

Mantherm K1 is a high temperature liquid heat transfer fluid with good thermal stability, which can operate perfectly for a long time in liquid heat transfer systems up to 390℃ at a pressure of 8 kg.

The maximum operating temperature of Mantherm K1 is up to 390℃, and its low viscosity and special chemical properties determine its high temperature stability.

The chemical composition of Mantherm K1 is carefully formulated to minimize the formation of low-boiling compounds, eliminate the formation of insoluble high-boiling compounds and the risk of scaling.

Mantherm K1 is used in heat transfer systems at 360℃to 390℃, which can significantly reduce capital investment and reduce utility and maintenance costs compared to other pressurized systems that use more volatile, high-melting point transfer media.

TypicalProperties

PROPERTY		TYPICAL VALUE
Appearance		Transparent
Density @20℃，g/cm^3		1.080
Pour point，℃		＜-40
Kinematic Viscosity	cst@-35℃，cSt	300
	cst@40℃，cSt	4.37
	cst@100℃，cSt	1.41
Viscosity Index		0
Flash point，℃		123
Coefficient of thermal expansion		0.00113/℃
Heat Capacity	200℃	2.04kJ/(kg·K)
	300℃	2.31kJ/(kg·K)
Thermal Conduct	200℃	0.1177W/m·K
	300℃	0.1056W/m·K

Properties

Temperature	Density	Heat Capacity	Thermal Conduct	Viscosity	Vapor Pressure
℃	kg/m³	kJ/(kg • K)	W/(m • k)	cSt[mm²/s]	kPa
-40	1142	1.39	0.1468	1806	
-20	1120	1.44	0.1444	87.3	
0	1100	1.50	0.1420	19.2	
20	1080	1.55	0.1396	7.88	
50	1050	1.63	0.1359	3.41	0.01
100	1010	1.77	0.1299	1.41	0.33
150	961	1.91	0.1238	0.804	3.12
200	916	2.04	0.1177	0.528	16.8
250	871	2.18	0.1117	0.418	61.6
300	825	2.31	0.1056	0.358	173
350	780	2.45	0.0995	0.323	403
390	744	2.57	0.0946	0.304	814