

Klübertherm 1-39 HT

Heat-transfer fluid for industrial applications



Your benefits at a glance

- Extended oil change intervals achievable due to highly refined paraffinic base oils
- Reduced maintenance efforts and dependable operation due to high thermal stability
- Low residue formation due to the high thermal and oxidation stability

Your requirements - our solution

As an operator of heat-carrier systems you have high expectations in terms of process reliability and safe operation. Hence, selecting the appropriate heat-transfer fluid is of utmost importance. Klübertherm 1-39 HT is an efficient heat-carrier fluid for closed systems, which meets the high requirements in terms of thermal stability.

Contrary to standard mineral oils, Klübertherm 1-39 HT contains highly refined hydrotreated heavy paraffinics to attain the high thermal stability of this heat-transfer fluid. Klübertherm 1-39 HT also stands out for its low vapour pressure and high oxidation stability. Therefore, Klübertherm 1-39 HT significantly contributes to reducing maintenance costs and extending oil change intervals.

Application

Klübertherm 1-39 HT is exclusively recommended as a closed-loop heat-transfer fluid.

Thanks to its performance characteristics Klübertherm 1-39 HT can be used in various industries such as wood, textiles, chemicals, automotive, asphalt, cement.

Application notes

Klübertherm 1-39 HT can be applied in new systems without prior cleaning, except when required for reasons of product quality. Residues of varnishes, oils and others originating from the system installation are usually not enough to affect the fluid lifetime. We strongly encourage you to take an oil sample in order to conduct laboratory analysis. Please check with your Klüber representative to assist you. Klübertherm 1-39 HT is normally compatible with common heat-transfer fluids.

The start-up procedure or cleaning process should be done in compliance with the documentation of the manufacturer of the heat transfer system. In the presence of inert gas, the operating time of this fluid may be considerably extended. It is highly recommended to analyse the oil every 6 months to allow a reliable and efficient operation of your heat transfer system.

If you have any further questions please do not hesitate to contact us.

Material safety data sheets

Material safety data sheets can be requested via our website www.klueber.com. You may also obtain them through your contact person at Klüber Lubrication.

Typical Properties **

Temperature (°C)	Density (g/cm ³)	Kinematic Viscosity (mm ² /s)	Specific Heat (kJ/kg*K)	Thermal Conductivity (W/m*K)
40	0,8534	43,323	2,041	0,1278
45	0,8503	35,105	2,062	0,1274
50	0,8473	28,882	2,083	0,1269

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Temperature (°C)	Density (g/cm ³)	Kinematic Viscosity (mm ² /s)	Specific Heat (kJ/kg*K)	Thermal Conductivity (W/m*K)
55	0,8443	23,748	2,104	0,1264
60	0,8413	19,599	2,127	0,1259
65	0,8382	16,520	2,150	0,1255
70	0,8352	14,441	2,174	0,1250
75	0,8322	12,390	2,199	0,1246
80	0,8292	10,315	2,224	0,1241
85	0,8262	9,396	2,250	0,1237
90	0,8231	8,252	2,277	0,1232
95	0,8201	7,331	2,305	0,1228
100	0,8171	6,602	2,334	0,1223
105	0,8141	5,885	2,363	0,1219
110	0,8110	5,364	2,392	0,1214
115	0,8080	4,853	2,422	0,1210
120	0,8050	4,435	2,452	0,1205
125	0,8020	4,130	2,482	0,1201
130	0,7989	3,713	2,511	0,1196
135	0,7959	3,511	2,541	0,1191
140	0,7929	3,198	2,570	0,1186
145	0,7899	2,994	2,598	0,1182
150	0,7869	2,785	2,625	0,1177
155	0,7838	2,685	2,651	0,1173
160	0,7808	2,476	2,676	0,1168
165	0,7778	2,375	2,698	0,1164
170	0,7748	2,166	2,719	0,1159
175	0,7717	2,065	2,736	0,1155
180	0,7687	1,960	2,752	0,1150
185	0,7657	1,859	2,765	0,1145
190	0,7627	1,754	2,779	0,1141
195	0,7597	1,652	2,792	0,1136
200	0,7566	1,650	2,806	0,1132
205	0,7536	1,549	2,820	0,1127
210	0,7506	1,444	2,833	0,1122
215	0,7476	1,342	2,847	0,1117
220	0,7445	1,341	2,861	0,1113
225	0,7415	1,239	2,874	0,1108

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Temperature (°C)	Density (g/cm ³)	Kinematic Viscosity (mm ² /s)	Specific Heat (kJ/kg*K)	Thermal Conductivity (W/m*K)
230	0,7385	1,238	2,888	0,1104
235	0,7365	1,136	2,901	0,1099
240	0,7335	1,135	2,915	0,1095
245	0,7304	1,033	2,929	0,1090
250	0,7284	1,032	2,942	0,1086
255	0,7254	0,991	2,956	0,1081
260	0,7234	0,949	2,969	0,1077
265	0,7204	0,919	2,983	0,1072
270	0,7183	0,887	2,997	0,1068
275	0,7153	0,857	3,010	0,1063
280	0,7133	0,825	3,024	0,1059
285	0,7113	0,795	3,037	0,1054
290	0,7093	0,763	3,051	0,1049
295	0,7063	0,743	3,065	0,1044
300	0,7042	0,712	3,078	0,1040
305	0,7022	0,692	3,092	0,1035
310	0,7002	0,670	3,105	0,1031
315	0,6982	0,650	3,119	0,1026
320	0,6962	0,629	3,133	0,1022
325	0,6942	0,609	3,146	0,1017
330	0,6922	0,598	3,160	0,1013

**** Based on one-time measurements. Measured values can vary slightly.**

Characteristics	Klübertherm 1-39 HT
Article number	029101
Composition, type of oil	hydrotreated mineral oil (API group II)
Maximum film temperature	340 °C
Minimum Operating Temperature, 20 mPas	55 °C
Minimum Start-up Temperature, 300 mPas	5 °C
Service temperature, upper limit	310 °C
Classification Q, ISO 6743-12	QC
Density, DIN 51757, 15.6°C	approx. 0.86 g/cm ³

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Characteristics	Klübertherm 1-39 HT
Flash point, DIN EN ISO 2719, Pensky-Martens closed cup	≥ 204 °C
Vapour pressure, 290°C, Bibliographical value (for information only)	approx. 30 hPa
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 40°C	approx. 43 mm ² /s
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	60 months

Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 90 years.

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