NEXTHERM HF

High Flash Heat Transfer Oil (series 113)

NEXTHERM HF is a high-flash point heat transfer oil designed for applications where the operation temperature must be below the flash point of the fluid. NEXTHERM HF utilizes synthetic base fluids, and a proprietary blend of advanced additives. This unique formulation increases fluid performance and lifespan by preventing fluid degradation and protecting pumps and rotary seals. NEXTHERM HF's excellent oxidative resistance makes it ideal for both open and closed system, with and without inert gas blanketing

This non-toxic and non-hazardous formulation is safe for workers and the environment and can be disposed in the same manner as used motor oil.

Applications

- **Open and closed loop heat transfer systems (inert gas blanketed)**

Benefits

- **Very high flash point. Allows for higher operating temperatures.**
- **Very long fluid life, Inhibited formulation, prolongs fluid life in the event of air contamination**
- **Clean running formulation, resists deposit formation**
- **Thermally stable formulation**
- **Low odour**
- **Low volatility and vapour pressure**
- **Can be disposed of using standard oil recycling service**

Specifications

Maximum Bulk Temperature °C	340
Maximum Film Temperature °C	360
Flash Point °C	275
Fire Point °C	306
Pour Point °C	-9
Specific Gravity @ 15°C	0,86
Thermal Conductivity @ 120°C(W/m*K)	0,147
Thermal Conductivity @ 220°C (W/m*K)	0,146
Thermal Conductivity @ 260°C (W/m*K)	0,144
Heat Capacity @ 220°C (kJ/kg*K)	2,195
Heat Capacity @ 280°C (kJ/kg*K)	2,302
Distillation Range, 10% °C	446
Distillation Range, 90%, °C	554

Values included in this TDS are typical and do not constitute a specification. Manufacturing specifications are available upon request. It is recommended that routine oil analysis tests be performed to properly assess the condition of the oil. Verify that this TDS is the most UpToDate version, specifications are subject to change due to possible formulation and raw material changes.

Temperature (°C)	Density (kg/m^3)	Kinematic Viscosity (cSt)	Dynamic Viscosity (cP)	Thermal Conductivity (W/m-K)	Heat Capacity (kJ/kg-K)	Vapor Pressure (kPa)
5	875,93	1027,33	899,88	0,135	1,824	0,00
10	872,83	685,54	598,36	0,134	1,843	0,00
15	869,73	471,34	409,94	0,134	1,861	0,00
20	866,63	333,00	288,59	0,134	1,879	0,00
25	863,53	241,15	208,24	0,133	1,897	0,00
30	860,43	178,62	153,69	0,133	1,915	0,00
35	857,33	135,05	115,78	0,133	1,933	0,00
40	854,23	104,04	88,88	0,132	1,952	0,00
45	851,13	81,55	69,41	0,132	1,970	0,00
50	848,03	64,92	55,06	0,131	1,988	0,00
55	844,93	52,44	44,31	0,131	2,006	0,00
60	841,83	42,92	36,13	0,131	2,024	0,00
65	838,73	35,56	29,82	0,130	2,042	0,00
70	835,63	29,79	24,89	0,130	2,061	0,00
75	832,53	25,21	20,99	0,130	2,079	0,00
80	829,43	21,54	17,87	0,129	2,097	0,00
85	826,33	18,57	15,34	0,129	2,115	0,00
90	823,23	16,13	13,28	0,129	2,133	0,00
95	820,13	14,12	11,58	0,128	2,152	0,00
100	817,03	12,45	10,17	0,128	2,170	0,00
105	813,93	11,04	8,99	0,127	2,188	0,00
110	810,83	9,86	7,99	0,127	2,206	0,00
115	807,73	8,84	7,14	0,127	2,224	0,00
120	804,63	7,98	6,42	0,126	2,242	0,00
125	801,53	7,23	5,79	0,126	2,261	0,00
130	798,43	6,58	5,25	0,126	2,279	0,00
135	795,33	6,02	4,79	0,125	2,297	0,00
140	792,23	5,52	4,37	0,125	2,315	0,00

Temperature (°C)	Density (kg/m^3)	Kinematic Viscosity (cSt)	Dynamic Viscosity (cP)	Thermal Conductivity (W/m-K)	Heat Capacity (kJ/kg-K)	Vapor Pressure (kPa)
145	789,13	5,09	4,01	0,125	2,333	0,00
150	786,03	4,70	3,69	0,124	2,352	0,00
155	782,93	4,36	3,41	0,124	2,370	0,00
160	779,83	4,05	3,16	0,124	2,388	0,00
165	776,73	3,78	2,94	0,123	2,406	0,03
170	773,63	3,53	2,73	0,123	2,424	0,07
175	770,53	3,31	2,55	0,122	2,442	0,07
180	767,43	3,11	2,39	0,122	2,461	0,07
185	764,33	2,93	2,24	0,122	2,479	0,07
190	761,23	2,77	2,11	0,121	2,497	0,12
195	758,13	2,62	1,99	0,121	2,515	0,13
200	755,03	2,48	1,87	0,121	2,533	0,15
205	751,93	2,36	1,77	0,120	2,552	0,19
210	748,83	2,24	1,68	0,120	2,570	0,23
215	745,73	2,13	1,59	0,120	2,588	0,27
220	742,63	2,04	1,51	0,119	2,606	0,33
225	739,53	1,95	1,44	0,119	2,624	0,39
230	736,43	1,86	1,37	0,118	2,642	0,48
235	733,33	1,78	1,31	0,118	2,661	0,57
240	730,23	1,71	1,25	0,118	2,679	0,68
245	727,13	1,64	1,20	0,117	2,697	0,83
250	724,03	1,58	1,15	0,117	2,715	1,00
255	720,93	1,52	1,10	0,117	2,733	1,22
260	717,83	1,47	1,05	0,116	2,752	1,47
265	714,73	1,42	1,01	0,116	2,770	1,78
270	711,63	1,37	0,97	0,116	2,788	2,16
275	708,53	1,32	0,94	0,115	2,806	2,58
280	705,43	1,28	0,90	0,115	2,824	3,16

Temperature (°C)	Density (kg/m^3)	Kinematic Viscosity (cSt)	Dynamic Viscosity (cP)	Thermal Conductivity (W/m-K)	Heat Capacity (kJ/kg-K)	Vapor Pressure (kPa)
285	702,33	1,24	0,87	0,114	2,842	3,75
290	699,23	1,20	0,84	0,114	2,861	4,49
295	696,13	1,17	0,81	0,114	2,879	5,50
300	693,03	1,13	0,79	0,113	2,897	6,60
305	689,93	1,10	0,76	0,113	2,915	8,04
310	686,83	1,07	0,74	0,113	2,933	9,71
315	683,73	1,04	0,71	0,112	2,952	11,73
320	680,63	1,02	0,69	0,112	2,970	14,51
325	677,53	0,99	0,67	0,112	2,988	18,07
330	674,43	0,97	0,65	0,111	3,006	23,06