

TECHNICAL DATA SHEET

NEXTHERM FG

Food Grade Thermal Fluid · 119 Series

NEXTHERM FG is a high-quality, food-grade thermal fluid formulated for high-temperature thermal systems that require a food-grade fluid.

It uses high-quality base fluids and additives to provide excellent protection against oxidation and thermal degradation.

**APPLICATIONS**

- Open and closed-loop thermal systems

BENEFITS

- Food-grade formulation (NSF H1 registered)
- Excellent film strength
- Excellent wear protection
- Long fluid life
- Excellent lubricity
- Resists thermal and oxidative breakdown
- Clean-running — resists sludge formation
- Suitable for a wide variety of applications and environments

TECHNICAL SPECIFICATIONS

Typical properties

Property	NEXTHERM FG
Maximum Bulk Temperature (°C)	327
Maximum Film Temperature (°C)	354
Flash Point (°C)	227
Fire Point (°C)	241
Pour Point (°C)	-17
Auto-Ignition Point (°C)	364
Specific Gravity @ 15 °C	0.86
Thermal Conductivity @ 120 °C (W/m·K)	0.138
Thermal Conductivity @ 220 °C (W/m·K)	0.133
Thermal Conductivity @ 260 °C (W/m·K)	0.130
Heat Capacity @ 220 °C (kJ/kg·K)	2.568
Heat Capacity @ 280 °C (kJ/kg·K)	2.699
Distillation Range, 10% (°C)	383
Distillation Range, 90% (°C)	494

PROPERTIES vs TEMPERATURE

Temp (°C)	Density (kg/m³)	Kinematic Viscosity (cSt)	Dynamic Viscosity (cP)	Thermal Conductivity (W/m·K)	Heat Capacity (kJ/kg·K)	Vapor Pressure (kPa)
0	870.13	434.98	378.49	0.146	1.847	0.00
10	863.40	207.45	179.11	0.145	1.877	0.00
20	856.67	110.41	94.59	0.144	1.913	0.00
30	849.94	64.28	54.64	0.144	1.948	0.00
40	843.22	40.29	33.97	0.143	1.978	0.00
50	836.49	26.84	22.45	0.143	2.008	0.00
60	829.76	18.80	15.60	0.142	2.043	0.00
70	823.03	13.74	11.31	0.141	2.078	0.00
80	816.30	10.41	8.50	0.141	2.108	0.00
90	809.57	8.12	6.57	0.140	2.138	0.00
100	802.84	6.50	5.22	0.140	2.173	0.00
110	796.11	5.32	4.23	0.139	2.208	0.00
120	789.39	4.43	3.50	0.138	2.238	0.01
130	782.66	3.75	2.94	0.138	2.268	0.01
140	775.93	3.23	2.50	0.137	2.303	0.03
150	769.20	2.81	2.16	0.137	2.338	0.05
160	762.47	2.47	1.88	0.136	2.368	0.07
170	755.74	2.19	1.66	0.136	2.403	0.10
180	749.01	1.96	1.47	0.135	2.438	0.16
190	742.28	1.77	1.32	0.134	2.468	0.23
200	735.56	1.61	1.19	0.134	2.498	0.34
210	728.83	1.48	1.08	0.133	2.533	0.49
220	722.10	1.36	0.98	0.133	2.568	0.69

PROPERTIES vs TEMPERATURE (CONT.)

Temp (°C)	Density (kg/m³)	Kinematic Viscosity (cSt)	Dynamic Viscosity (cP)	Thermal Conductivity (W/m·K)	Heat Capacity (kJ/kg·K)	Vapor Pressure (kPa)
230	715.37	1.26	0.90	0.132	2.598	0.97
240	708.64	1.17	0.83	0.132	2.628	1.33
250	701.91	1.09	0.77	0.131	2.663	1.80
260	695.18	1.03	0.71	0.130	2.699	2.41
270	688.45	0.97	0.66	0.130	2.729	3.20
280	681.72	0.91	0.62	0.129	2.764	4.20
290	675.00	0.86	0.58	0.129	2.799	5.46
300	668.27	0.82	0.55	0.128	2.829	7.04
310	661.54	0.78	0.52	0.128	2.859	8.99
320	654.81	0.75	0.49	0.127	2.894	11.39
330	648.08	0.72	0.47	0.127	2.929	14.31

NOTE

Values in this Technical Data Sheet are typical and do not constitute a specification. Manufacturing specifications are available on request. Routine fluid analysis is recommended to assess the in-service condition of the fluid. Specifications are subject to change due to formulation or raw-material updates; always verify that this TDS is the most current version.