

FRAGOLTHERM® X-T9-A

Heat Transfer Fluid
-110 °C up to 200 °C

Application

FRAGOLTHERM® X-T9-A is designed as a liquid specifically for use with extremely low temperatures.

FRAGOLTHERM® X-T9-A can be used in a temperature range of between -110 °C and 200 °C in a liquid phase. The film temperature at the heating element must not exceed a temperature of 220 °C.

FRAGOLTHERM® X-T9-A is distinguished by superb heat transfer properties and very good pumping characteristics, due to its particularly low viscosity in the low temperature range. **FRAGOLTHERM® X-T9-A** is therefore the ideal heat transfer medium for applications in the chemical and pharmaceutical industries, in which freezing and heating processes are to be combined.

Quality

FRAGOLTHERM® X-T9-A is a synthetic heat transfer fluid based on polydimethylsiloxane.

FRAGOLTHERM® X-T9-A exhibits exceptionally high thermostability across the entire operating temperature range.

In order to avoid moisture entering the thermal transfer system, it is recommended that a molecular sieve be installed in a bypass. Alternatively, moisture can be driven out by "stripping" with nitrogen in expansion tank at approx. 120 °C.

FRAGOLTHERM® X-T9-A is non-corrosive, odourless and inert.

Packaging

FRAGOLTHERM® X-T9-A is available as standard in steel drums and pails.

Note

Please expressly note that it is possible in general terms, when using heat transfer fluids (also below the maximum specified bulk temperature), that low and high-boiling substances may arise due to thermal or oxidative decomposition.

When handling the product it is essential to observe the safety data sheet.

Please get in touch with us if you require further information or general technical advice.

Properties

FRAGOLTHERM® X-T9-A			Method
Density @ 25 °C	[kg/m³]	845	ASTM D93
Viscosity @ 40 °C	[mm²/s]	0.96	
Heat capacity @ 25 °C	[kJ/kgK]	1.90	
Thermal cond. @ 25 °C	[W/mK]	0.11	
Pourpoint	[°C]	<-112	
Flash point	[°C]	>32	
Boiling point @ 1013 mbar	[°C]	>150	
Film temperature max.	[°C]	220	
Film temperature max.	[°C]	200	
Hazardous substance according to IATA/IMDG/ADR	[-]	yes	

10016eTd

FRAGOL THERM[®] X-T9-A

Temp. °C	Vapor Press. kPa (abs)	Density kg/m ³	Heat Capacity kJ/kgK	Thermal Cond. W/mK	Visc. (kin) mm ² /s	Visc. (dyn) mPas	Prandtl- Number
-110		980	1.64	0.133	65.0	63.7	786
-100		970	1.66	0.131	32.4	31.4	398
-90		960	1.68	0.130	19.4	18.6	240
-80		950	1.70	0.128	12.4	11.8	157
-70		940	1.72	0.127	8.79	8.26	112
-60		930	1.74	0.125	6.58	6.12	85.2
-50		920	1.76	0.123	5.06	4.66	66.6
-40		910	1.77	0.121	3.98	3.62	53.0
-30		900	1.79	0.119	3.18	2.86	43.1
-20		890	1.81	0.117	2.62	2.33	36.1
-10		880	1.83	0.115	2.20	1.94	30.8
0		870	1.85	0.113	1.70	1.48	24.2
10	1	860	1.87	0.110	1.40	1.20	20.5
20	1	850	1.89	0.108	1.22	1.04	18.1
30	1	840	1.91	0.105	1.07	0.90	16.3
40	2	830	1.93	0.103	0.96	0.80	14.9
50	3	820	1.95	0.100	0.86	0.71	13.8
60	4	810	1.96	0.098	0.78	0.63	12.6
70	6	800	1.98	0.095	0.72	0.58	12.0
80	9	790	2.01	0.092	0.66	0.52	11.4
90	14	780	2.02	0.089	0.61	0.48	10.8
100	19	760	2.04	0.086	0.57	0.43	10.3
110	27	750	2.06	0.083	0.53	0.40	9.87
120	37	740	2.08	0.080	0.49	0.36	9.43
130	50	730	2.10	0.076	0.46	0.34	9.28
140	66	720	2.12	0.073	0.43	0.31	8.99
150	87	710	2.14	0.070	0.40	0.28	8.68
160	113	700	2.15	0.066	0.37	0.26	8.44
170	145	690	2.17	0.063	0.36	0.25	8.56
180	183	680	2.19	0.059	0.33	0.22	8.33
190	230	660	2.21	0.055	0.31	0.20	8.22
200	286	650	2.23	0.051	0.29	0.19	8.24
210	352	640	2.25	0.048	0.28	0.18	8.40
220	429	630	2.27	0.044	0.26	0.16	8.45
230	520	610	2.29	0.040	0.25	0.15	8.73

10016eTd

All the above information is provided to the best of our knowledge. Any legal liability for the content of this information and the suitability of the product for certain applications is rejected. Technical data are approximate values and are subject to the usual production fluctuations.