

# FRAGOLTHERM® X-400-A (formerly FRAGOLTHERM® X-BF)

**Heat Transfer Fluid**  
**0 °C up to 200 °C (250 °C / 300 °C)**

## Application

FRAGOLTHERM® X-400-A is recommended for use in open heating baths operating at temperatures from 0 °C up to 200 °C and in other open heat transfer systems up to 250 °C after consulting the manufacturer. In closed systems without air exposure (e.g. inert gas blanketing or cold oil tank) the temperature limit can be extended up to 300 °C. Summary:

- 0 °C up to 200 °C: Open heating baths (with or without bath cover)**
- 0 °C up to 250 °C: Other open systems (marginal contact with ambient air)**
- 0 °C up to 300 °C: Closed systems (no contact with ambient air)**

Inert gas blanketing of the system's expansion tank is recommended to avoid a premature change-out of the fluid.

Solvents for FRAGOLTHERM® X-400-A are aliphatic and aromatic hydrocarbons, higher alcohols, ether and ester.

## Quality

FRAGOLTHERM® X-400-A is a synthetic heat transfer fluid based on polydimethylsiloxane with stabilisers.

Because of the stabilisers FRAGOLTHERM® X-400-A has a high thermal and oxidative stability and a low volatility.

FRAGOLTHERM® X-400-A is compatible with the most common materials in heat transfer systems. Silicone rubber is not recommended.

FRAGOLTHERM® X-400-A is a red brown, nearly odourless and chemically inert fluid with a very low toxicity.

## Packaging

FRAGOLTHERM® X-400-A is available in steel drums and pails.

## Notes

Please be advised that fluid decomposition can occur because of thermal or oxidative stress even below the recommended maximum bulk temperature. Fluid decomposition generally results in the formation of volatile products (low boilers) and polymeric high viscosity fractions (high boilers).

Please carefully review the safety data sheet before handling this fluid.

If you would like to know more about our heat transfer fluids, please do not hesitate to contact us.

## Properties

FRAGOLTHERM® X-400-A		Method
Density @ 25 °C	[kg/m³]	960
Viscosity @ 40 °C	[mm²/s]	40
Heat capacity @ 25 °C	[kJ/kgK]	1.51
Thermal cond. @ 25 °C	[W/mK]	0.15
Pourpoint	[°C]	<-60
Flash point	[°C]	>280
Boiling point @ 1013 mbar	[°C]	>395
Max. film temperature	[°C]	310
Max. bulk temperature	[°C]	300
Hazardous material	[-]	no

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**FRAGOL THERM<sup>®</sup> X-400-A**

Temp. °C	Density kg/m <sup>3</sup>	Heat Capacity kJ/kgK	Thermal Cond. W/mK	Visc. (kin) mm <sup>2</sup> /s	Visc. (dyn) mPas	Prandtl- Number
-20	994	1.48	0.162	150	149	1362
0	980	1.50	0.157	85.0	83.3	796
25	960	1.53	0.151	50.0	48.0	486
40	948	1.55	0.146	40.0	37.9	403
50	940	1.56	0.142	32.4	30.5	335
60	933	1.58	0.140	28.0	26.1	294
80	917	1.60	0.134	21.0	19.3	230
100	900	1.62	0.128	16.0	14.4	183
120	885	1.65	0.123	13.0	11.5	154
140	870	1.67	0.118	10.0	8.70	123
160	855	1.70	0.112	8.00	6.84	104
180	840	1.72	0.106	6.50	5.46	88.8
200	825	1.75	0.100	5.50	4.54	79.4
240	795	1.80	0.089	4.00	3.18	64.3

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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.