



SYLTHERM XLT

Silicone Heat Transfer Fluid

SYLTHERM XLT[†] heat transfer fluid is a specially formulated, high performance silicone polymer designed for use as a low temperature, liquid phase heat transfer medium. It offers outstanding low temperature heat transfer and pumpability, plus excellent thermal stability. SYLTHERM XLT fluid has essentially no odor, is low in acute oral toxicity, and is not listed as reportable under SARA Title III, Section 313^{††}.

Recommended use temperature range: -100°C (-150°F) to 260°C (500°F)

Suitable applications: Single fluid process heating and cooling systems in the pharmaceutical and fine chemical industries.

For health and safety information for this product, contact your Dow sales representative or call the number for your area on the second page of this sheet for a Material Safety Data Sheet (MSDS).

^{††} You may need to comply with similar or additional regulations in other countries.

Typical Properties of SYLTHERM XLT Fluid¹

Composition: Dimethyl Polysiloxane

Color: Crystal Clear Liquid

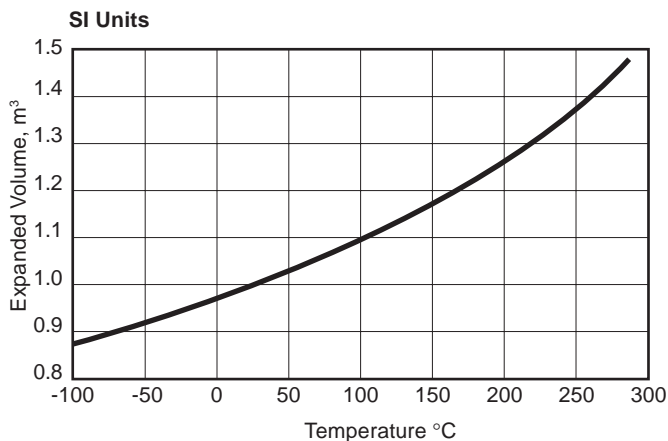
| Property | SI Units | English Units |
|---------------------------------------|-----------------------|---------------------------|
| Viscosity @ 25°C (77°F) | 1.4 mPa·s | 1.4 cp |
| Flash Point ² , Closed Cup | 47°C | 116°F |
| Flash Point ³ , Open Cup | 54°C | 130°F |
| Autoignition Temp., ASTM D-2155 | 350°C | 662°F |
| Acid Number, Typical | | 0.01 |
| Freeze Point | -111°C | -168°F |
| Density @ 25°C (77°F) | 852 kg/m ³ | 7.1 lb/gal |
| Specific Gravity @ 25°C (77°F) | | 0.85 |
| Heat of Combustion | 32,800 kJ/kg | 14,100 Btu/lb |
| Average Molecular Weight | | 317 |
| Estimated Critical Temperature | 327°C | 620°F |
| Estimated Critical Pressure | 12.16 bar | 12 atm |
| Estimated Critical Volume | 3.9 l/kg | 0.063 ft ³ /lb |

¹ Not to be construed as specifications.

² ASTM D92

³ ASTM D93

Thermal Expansion of SYLTHERM XLT Fluid



SYLTHERM XLT Synthetic Organic Heat Transfer Fluid

Saturated Liquid Properties of SYLTHERM XLT Fluid (SI Units)

| Temperature °C | Specific Heat kJ/kg K | Density kg/m ³ | Thermal Conductivity W/m K | Viscosity mPa-s | Vapor Pressure kPa |
|-------------------|--------------------------|------------------------------|-------------------------------|--------------------|-----------------------|
| -100 | 1.520 | 978.5 | 0.1341 | 78.6 | |
| -20 | 1.688 | 896.4 | 0.1192 | 3.1 | |
| 60 | 1.856 | 814.2 | 0.1019 | 0.80 | 1.8 |
| 140 | 2.024 | 732.0 | 0.0827 | 0.36 | 40.1 |
| 220 | 2.192 | 649.8 | 0.0620 | 0.22 | 261.9 |
| 280 | 2.318 | 588.2 | 0.0455 | 0.17 | 701.8 |

Saturated Liquid Properties of SYLTHERM XLT Fluid (English Units)

| Temperature °F | Specific Heat Btu/lb°F | Density lb/ft ³ | Thermal Conductivity Btu/hr ft ² (°F/ft) | Viscosity cP | Vapor Pressure psia |
|-------------------|---------------------------|-------------------------------|--|-----------------|------------------------|
| -150 | 0.363 | 61.23 | 0.0776 | 90.2 | |
| 0 | 0.405 | 55.88 | 0.0686 | 2.97 | |
| 150 | 0.446 | 50.53 | 0.0581 | 0.74 | 0.3 |
| 250 | 0.474 | 46.96 | 0.0505 | 0.42 | 3.2 |
| 350 | 0.502 | 43.40 | 0.0424 | 0.28 | 15.2 |
| 450 | 0.530 | 39.83 | 0.0339 | 0.21 | 47.5 |
| 550 | 0.558 | 36.26 | 0.0250 | 0.16 | 113.6 |

For further information, call...

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Published December 2003

NOTE: SYLTHERM heat transfer fluids are manufactured by Dow Corning Corporation and distributed by The Dow Chemical Company.

