



Shell Heat Transfer Fluid S4 T

Synthetic Heat Transfer Fluid for high temperature & low-pressure heat transfer systems

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

• High Working Temperature with Low Pour Point

Shell Heat Transfer Fluid S4 T is designed with a maximum bulk temperature of 350°C/660°F and film temperature of 375°C /705°F, which provides most applications with a uniform heat process in high temperature.

The low pour point of -24°C /-11°F allows for excellent low temperature flow properties enabling reliable performance for low temperature system start-up (to -3°C).

• Extended Maintenance Intervals

Heat transfer systems operating with Shell Heat Transfer Fluid S4 T can achieve long service intervals and it is recommended that systems utilizing Shell Heat Transfer Fluid S4 T should be blanketed with an atmosphere of inert gas to protect against the effects of fluid oxidation on its performance and life expectancy. The product offers long oil life with low deposit forming tendencies, nor the formation of “low boilers” upon degradation.

Shell Heat Transfer Fluid S4 T has a high boiling point with low volatility and is non-corrosive to materials commonly used in the manufacture of heat transfer system thus minimizing leakage risk, reduced oil consumption and extended system maintenance intervals.

Main Applications



Enclosed circulating heat transfer systems for industrial applications such as process industry, chemical plants, textile manufacture, oil and gas refinery, etc.

- Shell Heat Transfer Fluid S4 T is recommended for use at or below following temperatures to extend and achieve maximum oil life,

Max. bulk temperature: 350°C /660°F

Max. film temperature: 375°C/705°F

Specifications, Approvals & Recommendations

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Typical Physical Characteristics

| Properties | | | Method | Shell Heat Transfer Fluid S4 T |
|----------------------------|--------|--------------------|------------|--------------------------------|
| Density | @20°C | kg/m ³ | ISO 12185 | 1 017 |
| Flash Point | | °C | ASTM D92 | 186 |
| Flash Point | | °C | ASTM D93 | 175 |
| Pour Point | | °C | ISO 3016 | -24 |
| Kinematic Viscosity | @40°C | mm ² /s | ISO 3104 | 29 |
| Kinematic Viscosity | @100°C | mm ² /s | ISO 3104 | 4 |
| Carbon Residue (Conradson) | | % m/m | ISO 10370 | 0.01 |
| Total Acid Number | | mg KOH/g | ASTM D974 | 0.01 |
| Molecular Weight | | g/mol | ASTM D2502 | 252 |

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

- **Health and Safety**

Shell Heat Transfer Fluid S4 T is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from <https://www.epc.shell.com>

- **Protect the Environment**

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Advice**

Advice on applications not covered here may be obtained from your Shell representative.

- **Safety in Use**

The high flash point and autoignition temperatures of Shell Heat Transfer Fluid S4 T relative to many conventional mineral oils provides a higher degree of safety.