



## Heat Transfer Oil

Phillips 66® Heat Transfer Oil is a high-quality, thermally stable, inhibited mineral oil developed for use in both open and closed liquid-phase heat transfer systems.

Heat Transfer Oil is formulated with high-quality, hydroprocessed paraffinic base oils that have good thermal stability and low sludge-forming tendency. It is fortified with select additives that provide enhanced oxidation resistance for long service life, and detergency to help keep the system clean for maximum heat transfer efficiency.

### **Applications**

Heat Transfer Oil is recommended for use in closed liquid-phase heat transfer systems equipped with expansion tanks and pressure relief valves, where the maximum bulk oil temperature does not exceed 550°F (288°C). Preventive measures should be taken to minimize oil oxidation by eliminating air from the system prior to bringing the oil up to operating temperature. The use of an inert gas, such as nitrogen, under positive pressure in the expansion tank is recommended at all times during operation. Under no circumstances should the hot oil come into contact with air.

Heat Transfer Oil also is recommended for use in open liquid-phase heat transfer systems equipped with cold-oil sealed expansion tanks, where the maximum bulk oil temperature does not exceed 374°F (190°C).

Heat Transfer Oil is **not** recommended for use in vapor-phase heat transfer systems. Follow the equipment manufacturer's recommendations on oil change intervals, and for recommended practices when switching over from another brand of heat transfer oil.

Some common heat transfer applications for Heat Transfer Oil include:

- Direct and indirect-fired hot oil heaters in asphalt plants
- Hot corrugation and gluing
- Dehydration
- Molding and extrusion equipment
- Plastic and wax coating equipment
- Organic synthesis hot oil systems

**Inhibited  
Heat Transfer Oil  
For Open And  
Closed Systems**

### **Contact Information**

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Service:  
1-800-822-6457**

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1-800-766-0050**

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## Features/Benefits

- Excellent resistance to thermal breakdown at high temperatures
- Excellent performance in both open and closed heat transfer systems
- Long service life
- Excellent deposit control
- Low odor
- Noncorrosive

## Heat Transfer Oil

### Typical Properties

ISO Grade	46
Specific Gravity @ 60°F	0.868
Density, lbs/gal @ 60°F	7.24
Color, ASTM D1500	L 1.0
Flash Point (COC), °C (°F)	218 (424)
Autoignition Temperature, ASTM E659, °C (°F)	360 (680)
Pour Point, °C (°F)	-35 (-31)
Viscosity,	
cSt @ 40°C	46.0
cSt @ 100°C	6.8
SUS @ 100°F	237
SUS @ 210°F	49.0
Viscosity Index	97
Carbon Residue, ASTM D524, wt %	0.17
Specific Heat, Btu/lb/°F,	
@ 0°F (-18°C)	0.417
@ 200°F (93°C)	0.513
@ 400°F (204°C)	0.610
@ 550°F (288°C)	0.682
Vapor Pressure @ 500°F (260°C), mm Hg	8.0

## Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3.conocophillips.com/NetMSDS>.

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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