

# Texatherm<sup>®</sup> HT 22

Industrial Heat Transfer Oil



## Product description

**Texatherm<sup>®</sup> HT 22** is a highly refined, thermally stable synthetic heat transfer fluid formulated to operate over a wide temperature range, from -45°C up to +290°C, where it gives excellent oxidation stability and deposit free operation. For use as a heat transfer fluid in both closed and open heat transfer systems with forced circulation.

## Customer benefits

- **Maximum energy efficiency**  
Excellent heat transfer properties enable efficient transfer of heat and low temperature start up enable better energy efficiency.
- **Resists deposit formation**  
Excellent thermal stability and good oxidation resistance help to avoid formation of sludges and coke deposits, providing long oil service life.
- **Rapid response at start-up**  
Low pour point enable low temperature flow characteristics for easy circulation.
- **Economical low pressure operation**  
Low vapor pressure at elevated temperatures minimizes evaporation, vapor lock and pump cavitation, allowing efficient operation at lower system pressures, avoiding the need for expensive high pressure piping and heat exchangers.

## Applications

Texatherm HT 22 is recommended for indirect heat transfer in closed systems operating in a wide range of applications, such as chemical, leather, textile, rubber, chipboard, building materials and manufacturing & process industry operations. It is also suitable for use in laundries.

Within its wide operating temperature range Texatherm HT 22 can also be used in cooling applications for the removal of process heat.

Suitable for open or closed heat transfer systems with forced circulation operating under the following conditions:

Optimum operating temperature range: -45 to +290°C

Maximum use temperature: +300°C

Maximum film temperature: +310°C

Systems must have forced circulation of the heat transfer fluid.

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### Service considerations

Certain precautions should be taken to ensure satisfactory performance of heat transfer fluids in service:

#### **Oil Compatibility**

Topping up a system that is operating with a mineral oil based heat transfer medium with Texatherm HT 22 or vice versa is not recommended. Existing system with mineral oil, requires thorough flush prior of using Texatherm HT 22.

#### **System Cleanliness**

The heat transfer system, whether new or used, should be thoroughly cleaned and flushed with Texatherm before being placed in service. Sometimes this cleaning will require the use of chemical cleaners, usually in the form of an alkaline cleaning agent. These products are supplied, and are usually applied, by specialist industrial cleaning companies. In use they are often mixed with very hot water and pumped continuously through the system to remove deposits. If such chemical cleaners mixed with water are used, all traces of water and the cleaner must be removed from the system prior to it being brought back into service. Hot air blowing will usually successfully remove residual water.

#### **Heat Transfer System Materials**

Iron and steel are the preferred materials for heating system construction. Copper and copper alloys should not be used in heat transfer systems with a hydrocarbon fluid unless air (oxygen) is excluded from contact with the fluid by hermetic sealing and/or an inert gas "blanket".

The heater should be constructed with a minimum of refractory to improve thermal response, and to reduce heat-soak into the fluid in case of pump failure.

#### **System Seal**

Hot heat transfer fluid must be prevented from contacting the air in the expansion tank since air will cause rapid oxidation. To accomplish this, the expansion tank should be located and piped so that fluid in it remains cool (below 55°C).

#### **Hot Spots**

The system should be free of hot spots which will degrade the fluid and cause the formation of hard carbon deposits on the system surfaces. The fluid should be circulated through the heater with a fully turbulent flow, with a surface speed between 2 and 3 metres per second, depending on surface geometry and operating temperature.

The system should be designed so that:

1. The circulating pump is started before heat is applied to the heater
2. The circulating pump runs for some time after the heater is turned off
3. The heater will shut off in the event of circulating pump failure or the development of excessive temperatures.

Full fluid flow must always be maintained through the heater, regardless of the conditions at the heat exchanger. The system should be designed for the bypass of fluid at the heat exchanger if the full fluid flow is not required there. This will ensure that full fluid flow is retained at the heater.

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Service considerations *cont...*

## **In-Service Oil Testing**

The viscosity, acid number, flash point and insolubles content of the in-service fluid should be monitored regularly. Samples should be taken within a few days of start-up, and every six months afterward. Generally, it is the rate of change of in-service fluid properties which indicates the suitability of the fluid for further service.

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## Typical test data

TEXATHERM <sup>®</sup> HT 22	
Product Code	540509
ISO Grade	22
Autoignition Temperature, °C	349
Flash Point, COC, °C	198
Pour Point, °C	-57
Viscosity, Kinematic	
mm <sup>2</sup> /s @ 40°C	22.0
mm <sup>2</sup> /s @ 100°C	3.75
Viscosity Index	23
Appearance	Transparent, Light-Yellow Liquid
Density, 20°C, kg/l	0.8851
Colour	L1.5
Total Acid Number, mgKOH/g	0.01
Water Content, ppm	>50

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This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended. Produced by Chevron Global Lubricants: Asia Pacific.

ENVIRONMENT, HEALTH and SAFETY. Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit the [Product Information Center](#).

This Product Data Sheet (PDS) was produced for the Asia Pacific region based on the best available information at the time of issue. The specific information included may not directly reflect the market or conditions, and may vary. For the most up-to-date, country-specific information, please contact your local customer service center.

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Texatherm HT 22/Asia Pacific/CHV/PDSv1\_04/2024



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