Texatherm

Industrial heat transfer oil

Product Data Sheet

Product description

Texatherm is a proven performance highly refined, thermally stable paraffinic petroleum oil, formulated for use as an industrial heat transfer fluid for closed and open heat transfer systems with forced circulation.

Customer benefits

- Formulated to promote energy efficient heat transfer performance
- Oxidation and thermal stability helps resist harmful sludge and coke formation and contributes to long oil service life
- Low temperature fluidity assists rapid system start-up
- Low vapour pressure at elevated temperatures helps minimise evaporation, vapour lock and pump cavitation
- Efficient low pressure operation avoids the need for expensive high pressure pipe-work and heat exchanger systems

Applications

- May be used in heat transfer systems in industrial drying applications, rubber and plastics manufacture, heating of asphalt and fuel oil tanks, food processing, cooking and canning, factory heating, manufacture of soap, resin, glue, dyes, paints, pharmaceuticals and grease, wood laminate, fibre board and veneer manufacture, agricultural heating and drying, and chemical, petroleum and wax processing

- Maximum bulk oil temperature - 288°C
- Maximum film temperature on heater surfaces - 316°C
- Maximum temperature of oil surface in contact with air in open systems - 107°C

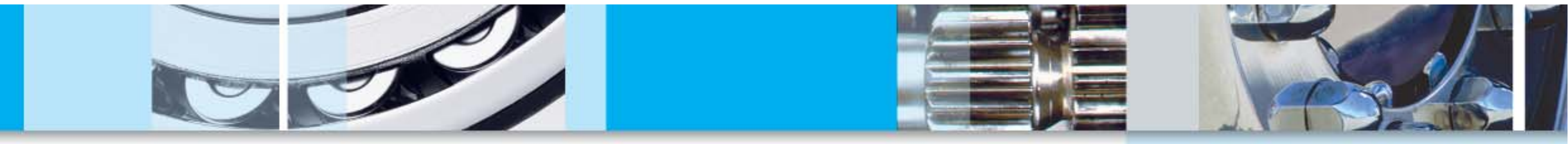
Systems must have forced circulation of the heat transfer fluid.

Product highlights:

- Promotes energy efficient heat transfer
- Helps prevent harmful sludge and coke formation
- Assists rapid system start-up
- Aids efficient low pressure operation

A **Chevron** company product

Our Family of Brands



Typical Key Properties

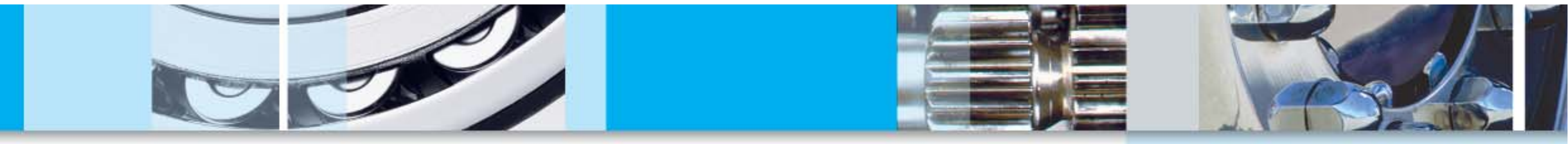
TEXATHERM TEST	TEST METHODS	RESULTS	
Viscosity Grade		32	46
Product Code		540510	540421
Kinematic viscosity at 40 °C, mm^2/s	ASTM D445	32.0	44.7
Viscosity Index	ASTM D2270	102	>100
Density at 20 °C, kg/l	ASTM D4052	0.86	0.864
Flash Point COC, °C	ASTM D92	>200	>200
Pour Point, °C	ASTM D97	-6	<-6
Air release at 50 °C, min.	ASTM D3427	2.3	2.3
TAN, mg KOH/g	ASTM D974	0.08	0.1
Foam Seq II, after blowing, ml	ASTM D892	0	0
Foam Seq II, after 10 minutes, ml	ASTM D892	0	0
Demulsibility at 54 °C, min.	ASTM D1401	40-40-0 (15)	40-40-0 (10)

Service considerations

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

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.



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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.

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.

Produced by Chevron Lubricants; Africa, Middle East and Pakistan.

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 www.caltexoils.com.

TXATHRM/AMEP/PDSv1_03/02/2015