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Plurasafe[®] HTF 14

Heat transfer fluid

Description

Plurasafe HTF 14 is a fluid based on modified polyalkylene glycol to ensure optimum performance in heat transfer applications.

Application

Heat transfer applications in properly designed closed, vented systems with bulk fluid temperatures up to 260 °C. Above 260 °C the fluid life is not long enough to make it practicable for process heating except in a few cases where certain properties of the fluid may be desired. Below 260 °C a charge of fluid will usually last from one to several years, depending on the design of the system and the operating temperature.

Features and benefits

Inside the system Plurasafe HTF 14 acts as a solvent for its own decomposition products, thereby preventing the deposition of sludge or gums.

- Better system cleanliness
- High chemical, thermal and hydrolytic stability
- Excellent lubricity

Typical properties Plurasafe HTF 14

The typical values presented here are believed to be accurate, they should not however be considered to constitute a specification.

Property	Unit	Plurasafe HTF 14	Method
Viscosity 40 °C	mm ² /s	55	ASTM D445
Viscosity 100 °C	mm ² /s	11	ASTM D445
Viscosity index	–	200	–
Density at 20 °C	g/cm ⁻³	1,039	ASTM D1298
Pourpoint	°C	–37	ASTM D97
Flashpoint COC	°C	244	ASTM D92
Coefficient of expansion at 20 °C	pro °C	0.00076	

Compatibility

Most types of material, including synthetic rubber are compatible with Plurasafe HTF 14. Special seals, gaskets and packaging are generally not necessary except in the case of very high temperature applications; in this instance VITON/FKM seals are recommended.

Fluid flow

Two essential parameters for determining fluid flow are the temperature uniformity required across the processing equipment and the circulation rate required in the heaters to prevent local overheating of the fluid. The heat demand of the equipment determines the first parameter. The circulation rate in the equipment must be sufficient to ensure that the temperature drop between inlet and outlet is within temperature tolerances required by the process.

For example, for a working temperature of 260 °C a skin temperature of 280 °C is permitted for the fluid providing the fluid flow is at least 3 m/sec.

Heat transfer system preparation

The presence of oil residue, sludge, scale-like material or other contaminants can disrupt the sensitivity of controls, foul up valves and impair the heat transfer characteristics of a system. Contamination also reduces the service life of a new fluid charge. Therefore, when the service life of a fluid is exhausted, or when Plurasafe HTF 14 is substituted for a competitive product, or even with initial charge of a new system, the system should be thoroughly cleaned before introducing the fresh fluid. This operation will prolong the service life of the replacement fluid and ensure satisfactory operation conditions of the system.

Storage stability

The product in original package can be stored for at least 2 years at ambient storage conditions and temperature without any deterioration.

Safety

When using this product, the information and advice given in our Safety Data Sheet should be observed. Due attention should also be given to the precautions necessary for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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