

Chemikel 604

Heat Transfer

Product Description

Chemikel 604 Heat Transfer is a specially formulated product for use in closed, cold oil-stacked heat transfer systems. It is designed for systems where temperatures may reach 600°F or higher.

Typical uses include hot oil heating systems in die-cast and asphalt plants, and other applications where indirect heating is preferred for economic or technical reasons, and the temperatures required are not obtainable with hot water or steam without excessively high temperatures. The temperatures in hot oil systems may reach 600°F or higher. At these temperatures, normal oils tend to decompose due to thermal cracking into lower boiling compounds, lowering the flash point, and increasing the risk of flammable vapors being driven off.

Chemikel 604 Heat Transfer is made with high VI oils, providing outstanding heat stability and resistance to oxidation due to air in leakage and entrainment. It also contains a careful balance of additives to substantially reduce deposits due to oxidation. The high viscosity index provides excellent pumpability at start-up, even at very low temperatures.

Compared to normal hydraulic oils and circulating oils, Chemikel 604 Heat Transfer has a much higher specific heat and thermal conductivity at all temperatures. This provides more rapid heating and a greater flexibility system over a wider temperature range. Chemikel 604 Heat Transfer has the ability to clean-up dirty systems that have used other fluids improving heat transfer and fluid movement. For systems that have high levels of coking, oxidation by-products, sludge and varnish and diminished fluid flow it is recommended that the system be cleaned with Sys-Kleen.

Features

- More resistance to thermal cracking
- Greater freedom from sludge and coke deposits.
- Longer service life.
- Higher heat transfer rates.
- Protection against corrosion.

CHEMIKEL

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Typical Properties

Product Number	852760
ISO Grade	32 / 46
Specific Gravity, 15.6°C	0.869
Specific Gravity, 260°C	0.713
Specific Gravity, 316°C	0.677
Color, D1500	1.5
Flash Point, D92, °F	430°F
Fire Point, D92, °F	465°F
Autoignition Temperature, E659, °F	665°F
Pour Point, D97, °F	6°F (-18°C)
Viscosity, D445, cSt @ 40°C	37.4
Viscosity, D445, cSt @ 100°C	6.01
Viscosity, D445, cSt @ 204°C	1.45
Viscosity, D445, cSt @ 260°C	0.96
Viscosity, D445, cSt @ 316°C	0.72
Average Molecular Weight	370
Acid Number, D974	0.06
Copper Corrosion	1B
D130, vol %/°F	0.03 to 0.05
D130, vol %/°F	0.06 to 0.10
Specific Heat, BTU/lb-°F, 100°F	0.46
Specific Heat, BTU/lb-°F, 400°F	0.602
Specific Heat, BTU/lb-°F, 500°F	0.65
Specific Heat, BTU/lb-°F, 600°F	0.7
Thermal Conductivity, BTU/(hr-ft ² -(F/ft)) @ 100°F	0.076
Thermal Conductivity, BTU/(hr-ft ² -(F/ft)) @ 400°F	0.0689
Thermal Conductivity, BTU/(hr-ft ² -(F/ft)) @ 500°F	0.067
Thermal Conductivity, BTU/(hr-ft ² -(F/ft)) @ 600°F	0.0648