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AFRIQ HEAT TRANSFER SYNTHETIC 28

DESCRIPTION

Afriq Heat Transfer Synthetic 28 can be used in the liquid phase in closed, forced circulation heat transfer systems and is a high synthetic, organic heat transfer medium.

Afriq Heat Transfer Synthetic 28 can also be used over the whole working range without being kept under pressure. The boiling range of the product at atmospheric pressure is above the use limit. The heat transfer medium is advantageously used in the temperature range from 250 °C to 340 °C. The upper use limit corresponds to a heater outlet temperature of 350 °C. The film temperature should not exceed the limit of 380 °C either significantly or for a prolonged period.

Afriq Heat Transfer Synthetic 28 is suitable for use in heating and cooling systems. The technical characteristics of **Afriq Heat Transfer Synthetic 28** charge can also be matched to the specific requirements of a system and optimized by mixing with **Afriq Heat Transfer Synthetic 28**. **Afriq Heat Transfer Synthetic 28** is also most suitable for indirect heating of reactors, polymerisation vessels and distillation columns, of processing machines and driers, and also heat exchangers in process plants and systems for heat recovery. The heat transfer systems should be designed and operated in accordance with the recommendations of DIN 4754 heat transfer installation working with organic heat transfer fluids. Heat transfer plants containing an **Afriq Heat Transfer Synthetic 28** charge can be started up at temperatures down to -5 °C, the heat transfer medium is to be protected from excessive cooling during the shut-down phase. **Afriq Heat Transfer Synthetic 28** circuits are advantageously operated using an inert gas back pressure of less than 100 mbar at the expansion vessel. **Afriq Heat Transfer Synthetic 28** is thermally stable up to an operating temperature of 300 °C. This product can be used for several years' without significant changes. At higher temperatures, low-boiling and high boiling decomposition products are formed. Nitrogen has proven to be a suitable inert gas. Inert gas blanketing is the best protection against changes caused by oxidation. Antioxidants are unstable at operating temperatures above 200 °C and are ineffective even after short operating times. Their degree of formation rises with increasing operating temperatures. The decomposition products remain completely dissolved in the **Afriq Heat Transfer Synthetic 28**. A build-up of low boilers should, however, be avoided, since they can impair the operation of the heat transfer system, particularly in the upper range from 340- 350 °C.

For this reason, the low ends should be removed; their removal may be discontinuous, but at temperatures above 340 °C should be continuous via the expansion vessel. To assist this measure, the temperature of the expansion vessel should be raised to about 150 °C. If used according to the recommended operation parameters, **Afriq Heat Transfer Synthetic 28** forms no deposits on the walls and does not lead to accumulation of solids in the heat transfer circuit. **Afriq Heat Transfer Synthetic 28** plants can be operated reliably and without high maintenance costs. To check the operating condition of heat transfer systems, quality controls should be carried out at appropriate intervals matched to the charge volume and the operating temperature of the heat transfer plant.



TYPICAL PHYSICAL CHARACTERISTICS

PROPERTY	VALUE	UNIT	TEST METHOD
VISCOSITY @ 20 °C	42 – 52	mm ² /s	DIN 51562
DENSITY @ 20 °C	1.04 – 1.05	g/ml	DIN 51757
CHLORINE	<10	Ppm	DIN 51408
ACID NUMBER	≤0,02	Mg KOH/g	DIN EN ISO 2114
APPEARANCE @ 20 °C	Liquid, clear	-	Visual