



Renolin Therm

Product Code: 430 (Rev. 5 – 05/04)

Description

Fuchs Renolin Therm oils are paraffinic heat transfer fluids for use in closed unpressurized heat transfer systems operating at bulk oil temperatures up to 315°C (ISO 22 to 68). For ISO 5 the maximum bulk operating temperature is 200 °C. They provide excellent resistance to thermal cracking and chemical oxidation and are non-toxic, have a very low odour level and have no detrimental effect on selected seals. They provide high specific heat and thermal conductivity at all temperatures and therefore give rapid heating and efficient operation of the heat transfer system.

Application

Fuchs Renolin Therm 5, 22, 32, 46 and 68 have high specific heat and thermal conductivity at all temperatures and, therefore, will give rapid heating and flexibility in a system. The characteristics of these products make them ideal where high heat transfer rates combined with high flow rates are desired. Fuchs Renolin Therm 22 is especially suited for systems where heating and cooling cycles are required since it functions effectively at both high and low temperatures and repeated thermal cycles.

The application limits of heat transfer oils depend first on circulating speed, and second on temperature in closed circuit systems. In general, the minimum velocities vs. temperatures are as follows:

- Velocity of 1.5 m/s (5 ft/s) for operating temperatures below 200°C (400°F).
- Velocity of 2.0 m/s (7 ft/s) for operating temperatures between 200 and 260°C (400 and 500°F).
- Velocity of 3.0 m/s (10 ft/s) for operating temperatures between 260 and 300°C (500 and 575 °F).
- Velocity of 3.5 m/s (12 ft/s) for operating temperatures above 300°C (575 °F).

Product Characteristics*

PROPERTIES	UNIT	VALUE					TEST METHOD
ISO Viscosity Grade		5	22	32	46	68	
Viscosity @ 40 °C	mm ² /s	5.0	20.5	32.5	45.0	67.0	ASTM D-445
@ 100 °C	mm ² /s	-	4.5	5.5	6.7	8.5	ASTM D-445
Viscosity Index		100	100	96	95	95	ASTM D-2270
Density @ 35 °C	kg/m ³	839	868	876	879	884	ASTM D-1298
Flash Point	°C	140	200	210	238	248	ASTM D-92
Pour Point	°C	- 9	- 9	- 9	- 6	- 6	ASTM D-97
Neutralization Number	mg KOH/g	0.06	0.06	0.06	0.06	0.06	ASTM D-974

*The information and figures given here are typical of current production and conform to specification, minor variations may occur.

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