

# MAK THERMIC FLUID FG

Food grade heat transfer fluid for superior performance

MAK Thermic Fluid FG is a superior quality food grade heat transfer oil formulated exclusively from highly refined hydro treated base stock and specially chosen additive system. MAK Thermic Fluid FG is a NSF H1 registered oil for incidental food contact and to be used in food processing environment. The special antioxidant additive package provides excellent resistance against oxidation and thermal break down of the oil and ensures longer operating life. It has a very high flash point, low vapour pressure and low volatility. This heat transfer fluid is non-corrosive to aluminum, steel, copper and brass.

## Applications:

MAK Thermic Fluid FG is developed for indirect heating in a closed loop liquid phase heating system. It is recommended for heat transfer systems in food processing and beverage packaging applications. It is also suitable for applications where repeated heating and cooling cycles are involved. MAK Thermic Fluid FG can be used in a continuous heat transfer system with maximum Bulk Temperature of 300°C.

## Performance/ Benefits:

**Excellent Oxidation Resistance** – Outstanding resistance to oxidation minimising sludge and deposit formation even when the oil undergoes repeated heating and cooling cycles. Specialised antioxidant system keeps heat exchanger internal surfaces clean. Longer operating life and lower operating cost.

**Excellent Thermal Stability** – provides resistance to thermal break down and deposit formation inside the piping for optimum life and performance.

**Low Viscosity** – low viscosity assures excellent fluidity and heat transfer over a wide temperature range.

**Low Volatility and Low Vapour Pressure** – low volatility coupled with low vapour pressure and high flash point indicates low evaporative loss. Reduces top up quantity. Low vapour pressure resists cracking and minimises the formation of volatile decomposition products.

**High Heat Transfer efficiency** – Excellent thermal conductivity and high heat transfer coefficient ensure rapid heating. Potential for saving in fuel consumption.

**Consistent Performance** – offers extended oil life, good pump circulation and efficient fluid heating. Enhances life of rotary seal and pump.

**Non-Corrosive and Non-Toxic** – Does not cause corrosion of the piping and other system components. Provides safe working environment to the operators. Suitable for food processing and other sensitive environments.

## Specification:

- Proprietary grade

## Typical Physico-Chemical Data: MAK Thermic Fluid FG

Characteristics	Method	Value
Appearance	Visual	Clear & Bright
Colour	Visual	Yellow
Density, g/cc @15°C	ASTM D1298	0.855
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1a
Pour Point, °C,	ASTM D97	-18
Flash Point, COC, °C	ASTM D92	226
Kinematic Viscosity @40°C, cSt	ASTM D445	31.0
Kinematic Viscosity @100°C, cSt	ASTM D94	5.5
Viscosity Index	ASTM D2270	114
Initial Boiling Point, °C	ASTM D1160	>360
Neutralisation Value, mg KOH/ g	ASTM D664	<0.2

## Storage & Handling:

The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 5 yrs. under protected storage conditions.

## Health & Safety:

They are unlikely to be hazardous when properly used in recommended applications. Contamination of the oil from other oils, greases, chemicals, dirty water etc. can occur during the use. It should be avoided. Regular monitoring of the in-use product is recommended.

NSF – NSF International, USA  
H1 – Possibility of incidental food contact