



# Hitectherm 32

## Synthetic Heat Transfer Fluid

**Hitectherm 32** was specially developed as a heat transfer fluid for open-type indirect heating equipment. **Hitectherm 32** is made from aromatic synthetic oil and provides fully satisfactory performance in all of the areas required for heat transfer fluids in such applications, including:

- 1) Resistance to degradation even when the fluid comes into contact with air.
- 2) Little evaporation loss.
- 3) Low toxicity and low odor.
- 4) Good low-temperature flow properties (to around  $-20^{\circ}\text{C}$ ).
- 5) Little risk of ignition or explosion.
- 6) No corrosion to pipes.

Thus **Hitectherm 32** has excellent properties for use as a heat transfer fluid in open systems.

### ● FEATURES

#### 1. Excellent Oxidation Stability

In open indirect heating equipment, high-temperature heat transfer fluid comes into contact with air, so the oil's degradation is determined mainly by the degree of oxidative degradation. Heat transfer fluids used in such systems thus require excellent oxidation stability. The oxidation life of **Hitectherm 32** is more than 10 times longer than that of mineral-oil-based heat transfer fluids.

#### 2. Low Volatility and Vapor Pressure, High Flash Point

Oils with large amounts of evaporation loss are not suitable for use as heat transfer fluids.

Because **Hitectherm 32** has very little evaporation loss and a low vapor pressure, it resists vapor clogging of circulation systems and cavitation in pumps.

#### 3. Other Features

**Hitectherm 32** has a minimum acute oral toxicity of 2700 mg/kg (LD50, mouse), which is a problem-free level (about the same as that of regular mineral-oil-based fluids). **Hitectherm 32** also has all

other features needed for a heat transfer fluid used in open indirect heating equipment.

### ● CONTAINERS

200-liter drums and 20-liter pails.

### ● APPLICATIONS

**Hitectherm 32** can be used as a heat transfer fluid in regular indirect heating equipment. It also provides excellent performance in open heating systems.

Examples of open indirect heating equipment include mold temperature controllers for extrusion molding machines for engineering plastics.

### ● TYPICAL PROPERTIES OF HITECTHERM 32

Density	(15°C)	g/cm <sup>3</sup>	0.909
Flash point	(COC)	°C	230
Kinematic viscosity	(40°C)	mm <sup>2</sup> /s	31.10
Viscosity index			89
Pour point		°C	-25
TAN		mgKOH/g	0.01
Copper strip corrosion	(100°C, 3 h)		1
Color	(ASTM)		L0.5

Note: The typical properties may be changed without notice. (June 2002)

## ● PHYSICAL PROPERTIES OF HITECTHERM 32

Temperature °C	Density g/cm <sup>3</sup>	Kinematic viscosity mm <sup>2</sup> /s	Heat conduction kJ/m · hr · °C	Specific heat kJ/kg · °C	Vapor pressure mmHg
0	0.918	349	0.465	1.821	—
20	0.906	84.9	0.461	1.892	—
50	0.888	20.8	0.452	1.988	—
100	0.859	5.12	0.440	2.126	—
125	0.844	3.24	0.431	2.214	—
150	0.829	2.26	0.427	2.302	0.033
175	0.815	1.69	0.419	2.394	0.12
200	0.800	1.32	0.414	2.482	0.60
225	0.785	1.08	0.406	2.536	1.6
250	0.771	0.92	0.402	2.658	5.8
275	0.756	0.79	0.393	2.750	15
300	0.741	0.70	0.389	2.838	35



## Handling Precautions

▼ Follow the following precautions when handling this product.

- Read this product's Material Safety Data Sheet before using the product.
- Obey all applicable laws and regulations concerning the handling and disposal of this product, particularly laws and regulations related to fire safety, the treatment and disposal of waste and sewage, the prevention of water and ocean pollution, and workplace safety and hygiene. Please request the Material Safety Date Sheet where you purchased this product.

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