

# 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

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

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 these precautions when handling this product.

<b>Composition :</b>	Base Oil
<b>Precautionary pictograms:</b>	Not applicable
<b>Signal word:</b>	Not applicable
<b>Hazard Statement:</b>	Not applicable
<b>Precautionary Statements:</b>	<ul style="list-style-type: none"> <li>• Do not handle until all safety precautions have been read and understood.</li> <li>• Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>• Do not allow the eyes to become exposed to the product. Do not swallow the product.</li> <li>• Wash hands thoroughly after handling.</li> <li>• Do not eat, drink or smoke when using this product.</li> </ul>
<b>Prevention</b>	
<b>Response</b>	<ul style="list-style-type: none"> <li>• IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</li> <li>• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>• If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.</li> <li>• IF ON SKIN: Wash with plenty of soap and water.</li> </ul>
<b>Storage</b>	<ul style="list-style-type: none"> <li>• The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.</li> <li>• Containers that have been opened must be tightly sealed.</li> </ul>
<b>Disposal</b>	<ul style="list-style-type: none"> <li>• Dispose of contents/container in accordance with local/regional/national/international regulations.</li> <li>• If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.</li> </ul>